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Basin Outlook Reports

and Federal - State - Private Cooperative Snow Surveys

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How forecasts are made

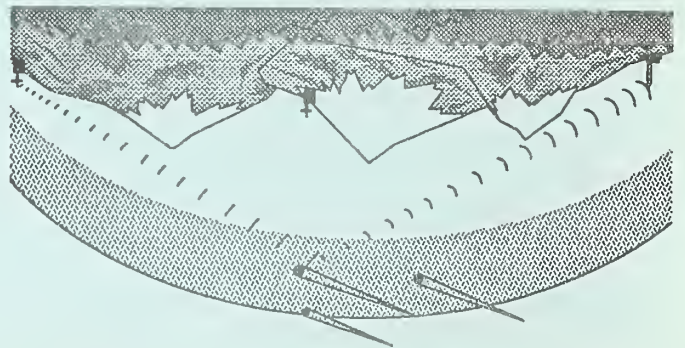
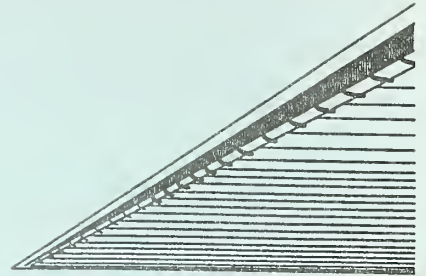
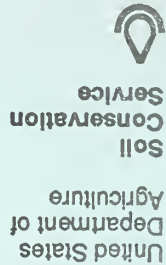
Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Soil Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

All programs and services of the USDA Soil Conservation Service, are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

Basin Outlook Reports



In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209-3489.

Issued by

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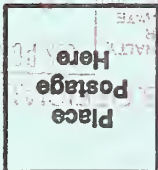
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5/1990

MAY 1990

GENERAL OUTLOOK

SUMMARY:

THE SNOWPACK DECREASED OVER THE ENTIRE STATE AND VARIED FROM 57% OF NORMAL IN THE BAKER RIVER BASIN TO 93% IN THE COWLITZ BASIN. APRIL PRECIPITATION WAS 103% OF NORMAL STATE WIDE, AND VARIED FROM 195% OF AVERAGE IN THE WALLA WALLA AREA TO 72% IN THE NORTH PUGET BASIN. WASHINGTON'S SNOTEL SITES ARE AVERAGING 82% OF NORMAL SNOWPACK ON MAY 1. (BY MAY 8 STATEWIDE AVERAGE WAS 78%) MAY 1 RESERVOIR STORAGE IS GOOD THROUGHOUT THE STATE, WITH RESERVOIRS IN THE YAKIMA BASIN AT 122%, UP FROM 97% OF NORMAL ON APRIL 1, AND MOST OF THE REST SHOWING OVER 100% OF AVERAGE. APRIL STREAMFLOWS VARIED FROM 107% OF NORMAL ON THE LEWIS RIVER TO 285% ON THE SIMILKAMEEN RIVER. MAY 1 FORECASTS FOR 1990 RUNOFF VARY FROM 93% OF AVERAGE IN THE CHELAN RIVER TO 58% ON MILL CREEK IN THE WALLA WALLA BASIN. APRIL TEMPERATURES WERE ABOVE NORMAL AND VARIED FROM 2 DEGREES ABOVE IN THE WHITE-GREEN BASIN TO 7 DEGREES ABOVE AVERAGE IN THE OKANOGAN BASIN. NOTE: THE TERMS "NORMAL" AND "AVERAGE" AS USED IN THIS PUBLICATION, ARE THE SAME.

SNOWPACK:

High pressure over Washington during April continued to bring dry, warm weather to the state. SNOTEL sites in Washington are showing snowpack that is 82% of average for May 1, state wide, down from 102% on April 1. Snowpack varies over the state from 93% of normal in the Cowlitz Basin to 57% in the Baker River Basin. The Yakima Basin is now at 76%, down from 98% last month. Snowpack in other basins along west slopes of the Cascade Mountains are the Skagit with 81%, down from 101%, and the White-Green Basin with 84%, down from 101%. The eastern slopes of the Cascade Mountains show the Wenatchee Basin at 80%, down from 103% of normal, and the Chelan at 92%, down from 108%. Maximum snow cover is at the Paradise Park SNOTEL, on Mt. Rainier with 74.4 inches of water content. This site would normally have 73.3 inches of water content on May 1.

PRECIPITATION:

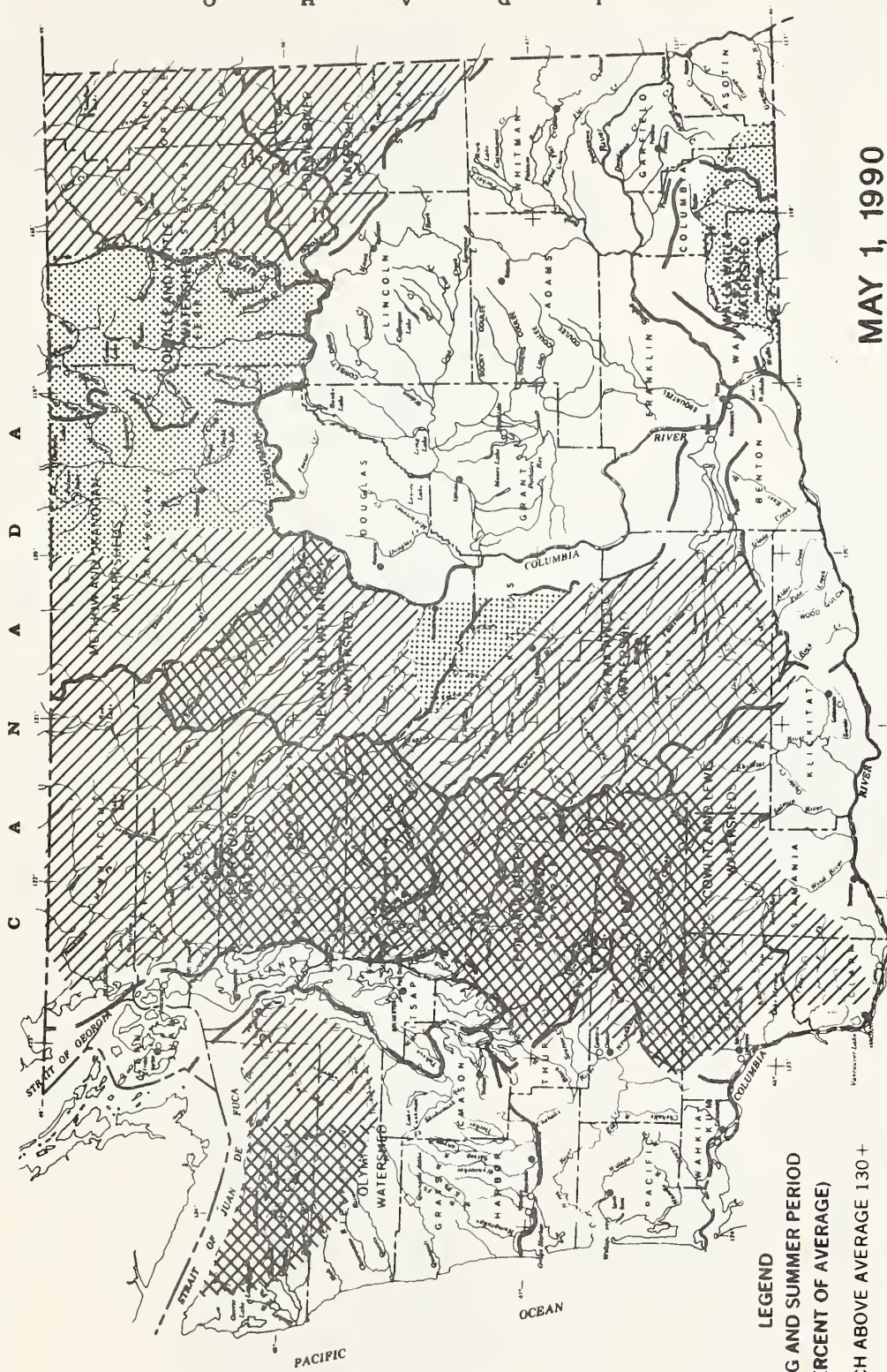
State wide, April precipitation from National Weather Service stations was 103% of average. April precipitation varied from 195% of average in the Walla Walla Basin, to 72% in the North Puget basin. The year-to-date precipitation varied from 111% of normal in the North Puget Basin to 84% in the Okanogan - Methow Basin. SNOTEL sites in Washington showed the high elevation year-to-date precipitation values to be 99% of average, down from 100% of normal on April 1. Maximum year-to-date precipitation was at the June Lake SNOTEL site on Mt. St. Helens with 144.8 inches since October 1.

RESERVOIRS:

Reservoir storage remained good with most reservoirs at or near average for May 1. Reservoir storage in the Yakima Basin was 956,700 acre feet, 122% of normal. Storage at other reservoirs include Roosevelt at 234% of average and the Okanogan reservoirs contained 107% of May 1 normal. The power reservoirs contain the following: Coeur d'Alene Lake, 392,200 acre feet, or 124% of normal; Chelan Lake, 353,700 acre feet at 79% of average and 52% of capacity, and Ross Lake at 763,300 acre feet, 118% of average.

STREAMFLOW:

April streamflows were above average in Washington, with all reporting streams over 100%. Above normal temperatures and near normal precipitation caused all low elevation snow to melt. The Similkameen River was at 285% of April average, the highest in the state. The Lewis River at 107% the lowest. Other streamflows were the Walla Walla River 114%, the Spokane River 133%, the Columbia at the Canadian border 163% and at the Dalles 125%. Streamflow forecasts were reduced from the previous month. Forecasts for some west side streams include: Cedar River, 95%; Skagit River, 88%; and the Dungeness River, 88%. Some east side streams include the Yakima River, 77% and the Okanogan River 67%.



LEGEND
SPRING AND SUMMER PERIOD
(PERCENT OF AVERAGE)

MUCH ABOVE AVERAGE 130 +

ABOVE AVERAGE 110-130

NEAR AVERAGE 90-110

BELOW AVERAGE 70-90

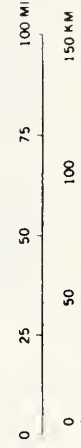
MUCH BELOW AVERAGE 70 + LESS

NOT FORECAST

WATERSHED BOUNDARY

MAY 1, 1990

STREAMFLOW PROSPECTS
WASHINGTON



SOURCE: Data compiled by SCS
Field Personnel

BASIN SUMMARY OF
SNOW COURSE DATA

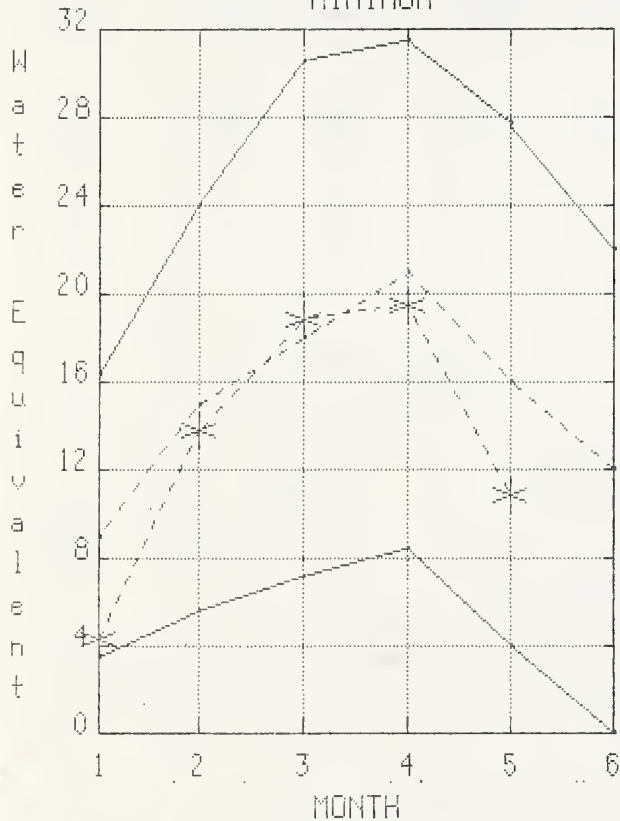
MAY 1990

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85	SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85	
PENNO OREILLE RIVER							COLOCKUM CREEK							
BENTON MEADOW	2370	5/01/90	0	.0	.0	.0	TROUGH #2	PILLON	5310	5/01/90	---	.06	1.0	5.6
BENTON SPRING	4920	5/01/90	17	6.1	11.5	15.4	YAKIMA RIVER							
BOYER MOUNTAIN	5250	4/25/90	31	13.2	20.2	24.8	BLEWETT PASS#2PILLON	4270	5/01/90	---	2.16	2.1	14.2	
BUNCHGRASS MEADOWS	5000	4/25/90	38	16.2	23.9	29.2	BUMPING LAKE	3450	4/30/90	3	1.5	3.8	8.7	
BUNCHGRASS NONPILLON	5000	5/01/90	---	21.7	24.9	29.1	BUMPING LAKE (NEW)	3400	4/30/90	6	3.0	5.0	12.5	
HEART LAKE TRAIL	4800	4/26/90	36	14.0	18.6	17.4	BUMPING RIDGE PILLON	4600	5/01/90	---	21.05	24.8	23.4	
HODDOD BASIN	5050	4/26/90	102	47.6	39.8	53.2	CORRAL PASS PILLON	6000	5/01/90	---	37.05	36.9	38.9	
HODDOD CREEK	5900	4/26/90	96	44.2	36.5	49.3	FISH LAKE PILLON	3370	5/01/90	---	30.76	23.8	26.6	
LOOKOUT	5140	4/30/90	65	26.6	24.6	32.7	GREEN LAKE PILLON	6000	5/01/90	---	13.26	22.4	20.9	
LOOKOUT CAN.	3100	4/30/90	12	5.4	8.3	7.2	GROUSE CAMP PILLON	5380	5/01/90	---	.05	13.3	12.9	
NELSON	3100	4/30/90	12	5.4	8.3	7.2	MORSE LAKE PILLON	5400	5/01/90	---	38.26	50.3	55.3	
SCHWEITZER BOHL	4800	5/02/90	27	11.5	14.8	24.2	OLALLIE E.S. PILLON	3960	5/01/90	---	50.65	51.8	69.0	
SCHWEITZER RIDGE	6200	5/02/90	82	37.8	39.8	48.8	SABSE RIDGE PILLON	4200	5/01/90	---	29.95	25.0	33.5	
KETTLE RIVER							STANPEDE PASS PILLON	3860	5/01/90	---	45.66	44.1	38.7	
BARNES CREEK CAN.	5300	4/30/90	42	18.8	17.7	20.5	TUNNEL AVENUE	2450	4/26/90	15	6.4	7.7	14.3	
BIG WHITE MTH CAN.	5510	4/26/90	28	10.8	16.1	19.9	WHITE PASS ES PILLON	4500	5/01/90	---	20.55	14.1	24.8	
CARMI CAN.	4100	4/27/90	0	.0	.0	1.7	ANTANUM CREEK							
FARROW CAN.	4000	4/27/90	7	2.5	7.2	10.4	GREEN LAKE PILLON	6000	5/01/90	---	13.26	22.4	20.9	
GRATSTOKE LAKE CAN.	5940	4/26/90	38	16.0	12.9	18.1	HILL CREEK							
HONASHEE PASS CAN.	4500	4/30/90	24	9.6	10.5	12.8	HIGH RIDGE PILLON	4980	5/01/90	---	.05	18.2	20.8	
TRAPPING CK LON CAN.	3050	4/26/90	0	.0	.0	.0	LEWIS - CONLIT2 RIVERS							
TRAPPING CK UP CAN.	4460	4/26/90	0	.0	--	5.6	JUNE LAKE PILLON	3200	5/01/90	---	23.08	31.7	24.8	
COLVILLE RIVER							LOME PINE PILLON	3600	5/01/90	---	23.25	---	45.1	
OHAK LAKE, THIN LAKES							PARADISE PARK PILLON	5500	5/01/90	---	74.45	79.4	73.3	
THIN LAKES	2700	5/01/90	---	.0E	--	--	PICATAIL PEAK PILLON	5900	5/01/90	---	57.85	66.3	52.1	
SPOKANE RIVER							POTATO HILL PILLON	4500	5/01/90	---	12.35	15.4	27.3	
ABOVE BURKE	4100	5/01/90	---	.0E	6.8	18.6	BNEEP CANYON PILLON	4050	5/01/90	---	60.65	53.2	43.7	
LOOKOUT	5140	4/30/90	65	26.6	24.6	32.7	SPEWCK MTH PILLON	3400	5/01/90	---	20.26	24.4	26.6	
LOST LAKE	6110	4/30/90	109	46.9	47.1	60.1	SPIRIT LAKE PILLON	3100	5/01/90	---	.09	.0	.0	
MOSQUITO RIDGE	5200	5/01/90	---	30.3E	29.1	36.6	SURPRISE LKS PILLON	4250	5/01/90	---	35.35	44.0	55.6	
MOSQUITO PILLON	5200	5/01/90	---	31.0	29.2	37.0	WHITE PASS ES PILLON	4500	5/01/90	---	20.55	14.1	24.8	
SUNSET	5540	5/01/90	---	18.6E	26.9	32.8	WHITE RIVER							
HEMNHAN LAKE							CORRAL PASS PILLON	6000	5/01/90	---	37.05	36.9	38.9	
QUARTZ PEAK PILLON	4700	5/01/90	---	17.1	17.6	--	MORSE LAKE PILLON	5400	5/01/90	---	38.25	50.3	55.3	
OKANOGAN RIVER							GREEN RIVER							
ABERDEEN LAKE CAN.	4300	4/29/90	0	.0	--	1.7	COUGAR MTH. PILLON	3200	5/01/90	---	4.45	16.3	13.8	
BLACKWALL PEAK CAN.	6370	4/23/90	60	30.0	29.9	36.3	GRASS MOUNTAIN #2	2900	5/03/90	0	.0	.0	--	
BRENOA MINE CAN.	4800	4/30/90	7	1.5	9.1	9.8	LESTER CREEK	3100	5/03/90	34	15.6	19.0	--	
BROOKHIRE CAN.	3200	4/30/90	4	1.2	--	5.1	LYNN LAKE	4000	5/03/90	27	11.7	.0	20.7	
CHERRY CAN.	6200	4/30/90	98	44.9	38.8	42.9	SAWILL RIDGE	4700	5/03/90	56	27.4	32.0	--	
ESPERON CK. UP CAN.	5410	4/29/90	20	6.4	10.2	17.5	STANPEDE PASS PILLON	3860	5/01/90	---	45.65	44.1	38.7	
ESPERON CK. MIO CAN.	4690	4/29/90	4	1.2	6.4	11.9	TIW CAMP	4100	5/03/90	42	20.3	15.0	--	
ESPERON CK. LO CAN.	4400	4/29/90	1	.2	3.2	8.9	CEDAR RIVER							
FREEZEOUT CK. TRAIL	3500	4/30/90	5	2.4	3.6	7.8	SHOQUALMIE RIVER							
GREYBACK RES CAN.	5120	4/30/90	17	3.0	7.3	7.7	KRONOWA MINE	2400	5/01/90	41	22.1	30.7	--	
HAMILTON HILL CAN.	4890	4/27/90	19	7.6	10.5	12.6	OLALLIE E.S. PILLON	3960	5/01/90	---	50.65	51.8	69.0	
HARTS PASS	6500	4/30/90	83	38.4	39.6	46.8	OLWEY PASS	3250	5/01/90	14	6.9	23.6	--	
HARTS PASS PILLON	6500	5/01/90	---	43.55	44.6	56.7	SKYKOWISH RIVER							
ISINTOK LAKE CAN.	5500	4/26/90	0	.1	2.0	6.3	STANPEDE PASS PILLON	3860	5/01/90	---	45.65	44.1	38.7	
LIGHTNING LAKE CAN.	4000	4/26/90	21	8.5	7.8	11.5	STEVENS PASS PILLON	4070	5/01/90	---	37.25	34.1	41.3	
LOST HORSE MTH CAN.	6300	4/30/90	30	8.1	--	10.3	STEVENS PASS SAND 50	3700	4/27/90	44	18.0	19.9	31.3	
MCCULLOCH CAN.	4200	5/02/90	0	.0	.0	2.4	SKAGIT RIVER							
MISSZULA MTH CAN.	5090	4/27/90	9	2.1	2.9	7.0	BEAVER CREEK TRAIL	2200	4/30/90	0	.0	.4	4.9	
MISSION CREEK CAN.	5800	4/26/90	51	20.9	18.7	21.8	BEAVER PASS	3680	5/01/90	46	21.5	20.4	29.3	
MOMASHEE PASS CAN.	4500	4/30/90	24	9.6	10.5	12.8	BROWN TOP AM	6000	4/30/90	115	56.4	57.0	63.3	
MT. KOBAY CAN.	5900	4/28/90	26	6.7	10.6	13.3	DEVILS PARK	5900	4/30/90	87	41.4	39.4	46.2	
NUTTON CREEK #1	5700	4/30/90	0	.0	7.5	10.3	FREEZEOUT CK. TRAIL	3500	4/30/90	5	2.4	3.6	7.8	
OYANA LAKE CAN.	4400	4/27/90	0	.0	1.2	3.1	HARTS PASS	6500	4/30/90	83	38.4	39.6	46.8	
POSTILL LAKE CAN.	4500	5/01/90	2	.6	3.3	6.4	HARTS PASS PILLON	6500	5/01/90	---	43.55	44.6	56.7	
RUSTY CREEK	4000	4/30/90	0	.0	.0	.6	KLESILKNA CAN.	3710	4/29/90	6	2.2	3.5	8.3	
SALMON MMS PILLON	4500	5/01/90	---	.05	.0	7.4	LIGHTNING LAKE CAN.	4000	4/26/90	21	8.5	7.8	11.5	
SILVER STAR MTH CAN.	6000	4/29/90	56	23.8	24.8	29.7	LYMAN LAKE PILLON	5900	5/01/90	---	66.55	61.7	67.5	
SUNMERLAND RES CAN.	4200	4/26/90	1	.2	3.3	6.3	HEADONS CABIN	1900	4/30/90	0	.0	.0	1.3	
SUNDAY SUMMIT CAN.	4300	4/26/90	0	.0	.0	.8	NEW MOZDHEW LAKE	4780	5/01/90	82	37.8	34.8	41.5	
TROUT CREEK CAN.	4690	4/30/90	5	.6	2.4	4.8	RAINY PASS	3800	4/30/90	0	.0	.0	6.0	
VASEUX CREEK CAN.	4600	5/01/90	4	1.0	1.6	3.0	RAINY PASS PILLON	4780	5/01/90	---	38.55	35.3	45.4	
WHITE ROCKS MTH CAN.	6000	4/27/90	27	10.9	15.2	22.4	THUNDER BASIN	4200	4/30/90	41	17.8	22.8	22.8	
METHUN RIVER							BAKER RIVER							
HARTS PASS	6500	4/30/90	83	38.4	39.6	46.8	DOCK BUTTE	AM	3800	5/01/90	---	31.9E	47.9	70.8
HARTS PASS PILLON	6500	5/01/90	---	43.55	44.6	56.7	EAST PASS	AM	5200	5/01/90	---	62.4E	58.3	89.2
NUTTON CREEK #1	5700	4/30/90	0	.0	7.5	10.3	JASPER PASS	AM	5400	5/01/90	---	65.1E	67.2	93.0
RUSTY CREEK	4000	4/30/90	0	.0	.0	.6	WARTEN LAKE	AM	3600	5/01/90	---	31.5E	65.6	78.8
SALMON MMS PILLON	4500	5/01/90	---	.05	.0	7.4	WT. BLUM	AM	5800	5/01/90	---	61.4E	57.5	72.3
CMELAN LAKE BASIN							ROCKY CREEK	AM	2100	5/01/90	---	.0E	5.8	20.7
LYMAN LAKE PILLON	5900	5/01/90	---	66.55	61.7	67.5	SCHREIBERS MTH	AM	3400	5/01/90	---	23.9E	41.6	59.7
MIMERS RIDGE PILLON	6200	5/01/90	---	55.55	45.5	--	SF THUNDER CK	AM	2200	5/01/90	---	.0E	.0	1.3
PARK CK RIDGE PILLON	4600	5/01/90	---	35.85	42.0	39.9	WATSON LAKES	AM	4500	5/01/90	---	42.4E	48.3	70.7
RAINY PASS	4780	5/01/90	82	37.8	34.8	41.5	ELWNA RIVER							
RAINY PASS PILLON	4780	5/01/90	---	38.55	35.3	45.4	MURRICAME	4500	4/28/90	29	13.0	17.0	23.9	
EMTAT RIVER							HORSE CREEK							
POPE RIDGE PILLON	3540	5/01/90	---	.05	.0	6.7	COX VALLEY	4500	4/29/90	57	27.4	32.8	40.8	
HEMATHCREE RIVER							OUNGENESS RIVER							
BERNE-HILL CREEK	3170	4/27/90	53	22.8	20.5	20.8	DEER PARK	5200	4/30/90	9	4.4	7.0	21.1	
BLEWETT PASS#2PILLON	4270	5/01/90	---	2.15	2.1	14.2	QUILCEWE RIVER							
CHIMAUUM E.S.	2500	4/27/90	0	.0	.0	1.1	WOUNT CRAG PILLON	4050	5/01/90	---	13.25	--	--	
FISH LAKE PILLON	3370	5/01/90	---	30.75	23.8	26.6	WYNDOCWEE RIVER							
LYMAN LAKE PILLON	5900	5/01/90	---	66.55	61.7	67.5	CARROL PASS	3650	5/03/90	36	17.5	31.0	30.0	
WERRITT	2140	4/27/90	0	.0	.0	4.1								
STEVENS PASS PILLON	4070	5/01/90	---	37.25	34.1	41.3								
STEVENS PASS SAND 50	3700	4/27/90	44	18.0	19.9	31.3								
TRDUGH #2 PILLON	5310	5/01/90	---	.05	1.0	5.6								
UPPER WHEELER PILLON	4400	5/01/90	---	.05	5.7	8.8								
SOULCHUCK CREEK							QUILCEWE RIVER							
STEWILT CREEK							WOUNT CRAG PILLON	4050	5/01/90	---	13.25	--	--	
UPPER WHEELER PILLON							4400	5/01/90	---	.05	5.7	8.8	WYNDOCWEE RIVER	
							CARROL PASS	3650	5/03/90	36	17.5	31.0	30.0	

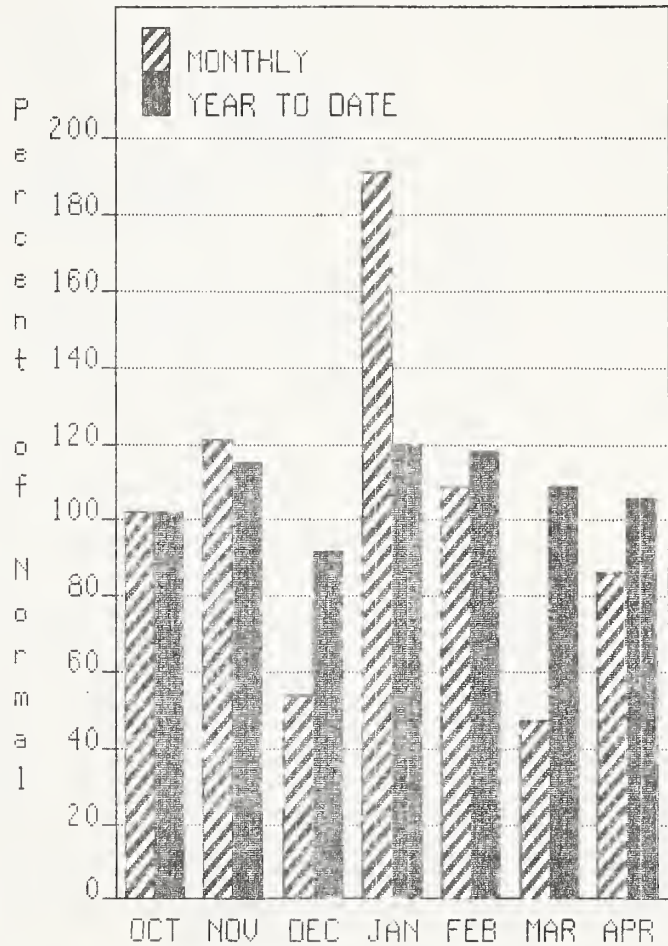
SPOKANE

Mountain snowpack* (inches)

--- CURRENT
 AVERAGE
 MAXIMUM
 MINIMUM



Precipitation* (percent of normal)



*Based on selected stations

SPokane River Basin

WATER SUPPLY OUTLOOK:

Streamflow on the Spokane River was 163% of normal for April. May 1 storage in Coeur d'Alene Lake was 392,200 acre feet; average storage in Coeur d'Alene for May 1 is 317,200 acre feet. Forecasted summer runoff for the Spokane River Basin is 76% of normal; down from 90% on April 1. This forecast is based on a snowpack 68% of average and a water year-to-date precipitation value 106% of normal. Precipitation for April was 86% of average. Maximum snow water occurred at the Lost Lake snow course with 109 inches of snow and 46.9 inches of water content, May 1 average for this site is 60.1 inches of water. The Quartz Peak SNOTEL site near Mt. Spokane had 35 inches of snow with a water content of 14.0 inches. Temperatures averaged four degrees above normal during April.

For more information contact your local Soil Conservation Service office.

SPOKANE RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div> <div><----- DRIER -----</div> <div>FUTURE CONDITIONS</div> <div>----- WETTER -----></div> </div>						
		CHANCE OF EXCEEDING *						
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	25 YR. (1000AF)
SPOKANE nr Post Falls (1,2)	AFR-SEP	1860	2460	2730	97	3000	3600	2820
	APR-JUL	1800	2380	2640	97	2900	3480	2723
SPOKANE at Long Lake (2)	APR-JUL	2100	2610	2950	97	3290	3800	3045

RESERVOIR STORAGE

(1000AF)

WATERSHED SNOWPACK ANALYSIS

RESERVOIR	USEABLE : CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
		THIS	LAST	AVG.			LAST YR.	AVERAGE
		YEAR	YEAR	AVG.				
COEUR D'ALENE	291.2	212.8	243.2	234.3	Spokane River	19	95	93

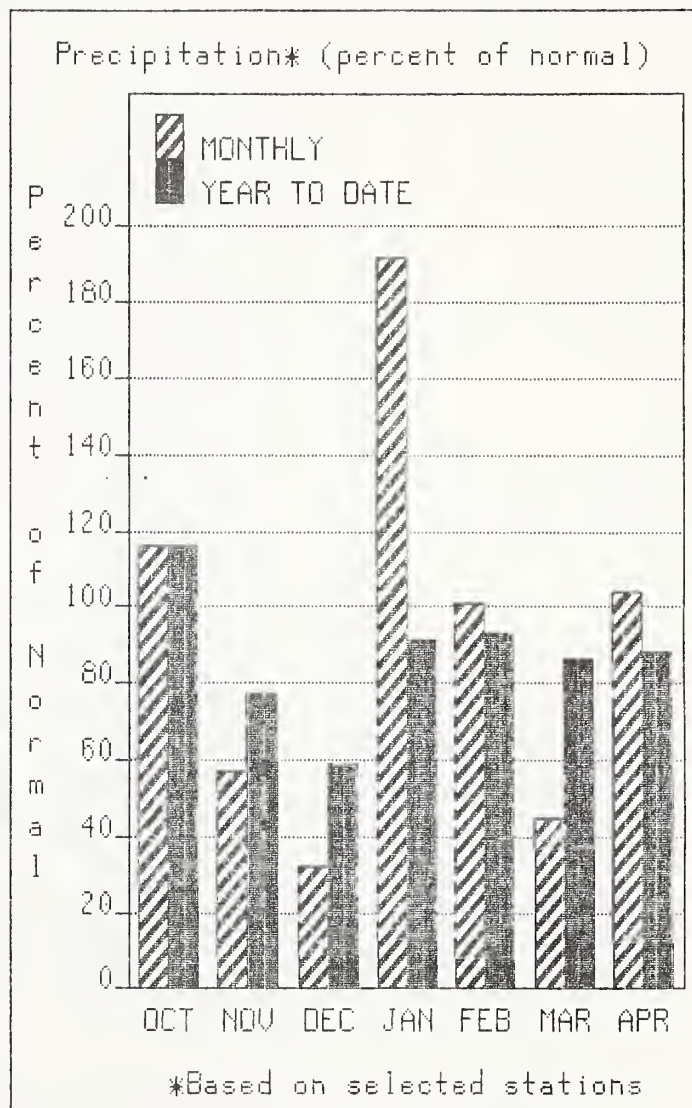
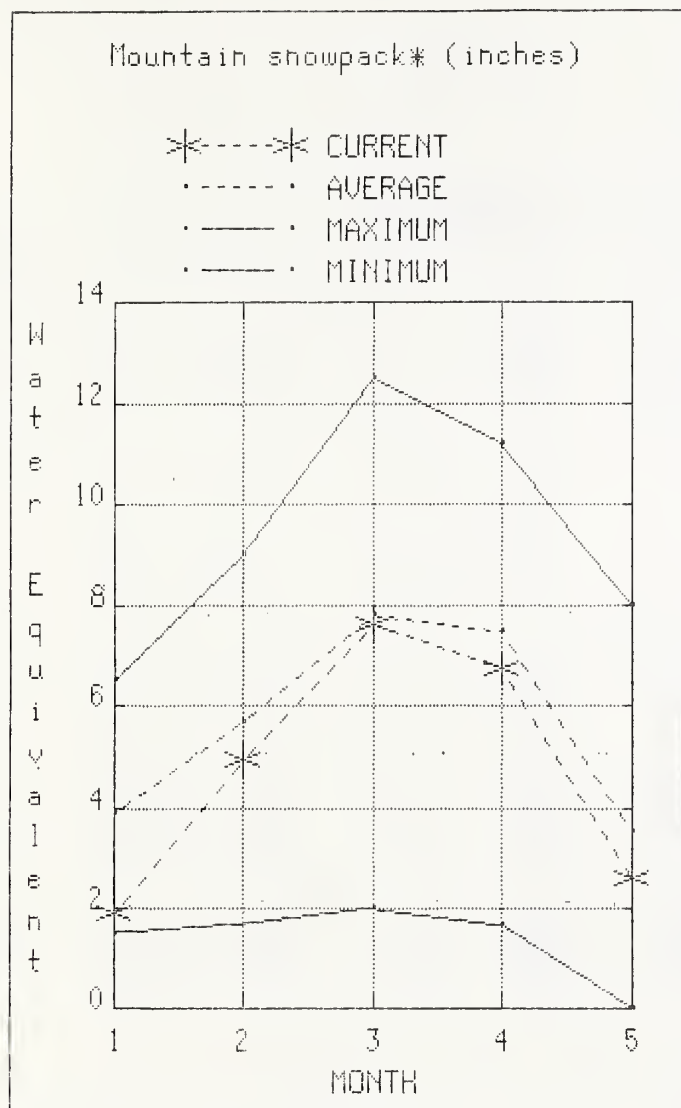
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

COLVILLE - PEND OREILLE



WATER SUPPLY OUTLOOK:

May 1 snow cover is 76% of average on the Pend Oreille and 69% on the Kettle. April streamflow was 160% of normal on the Pend Oreille River, 163% on the Columbia at the International Boundary and 152% on the Kettle River. Precipitation during April was 104% of average, bringing the water year-to-date to 88% of normal. The forecast for the Kettle River streamflow is 75% of normal and the Colville River at 76% of normal for the summer runoff period. Forecast for the Pend Oreille is 82%. Snowpack at Bunchgrass Meadow SNOTEL site was 21.7 inches of water, the average May 1 reading is 29.1. Temperatures averaged three degrees above normal for April.

For more information contact your local Soil Conservation Service Office.

COLVILLE - PEND OREILLE RIVER BASINS

STREAMFLOW FORECASTS								
FORECAST POINT	FORECAST PERIOD	<----- DRIER ----->				FUTURE CONDITIONS		
		CHANCE OF EXCEEDING *				<----- WETTER ----->		
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	25 YR. (1000AF)
PEND OREILLE bl Box Canyon (1,2)	APR-SEP	10500	12800	13800	91	14800	17100	15170
	APR-JUL	9560	11700	12600	91	13500	15600	13900
	APR-JUN	8290	10100	10900	91	11700	13500	11960
CHAMOKANE CK nr Long Lake	MAY-AUG	3.8	6.0	7.4	80	8.8	11.0	9.2
COLVILLE at Kettle Falls	APR-SEP	61	93	115	83	137	169	139
	APR-JUL	56	85	105	82	125	155	128
	APR-JUN	52	80	98	83	117	144	118
KETTLE nr Laurier	APR-SEP	1030	1350	1560	82	1770	2090	1907
	APR-JUL	980	1280	1480	82	1680	1980	1807
	APR-JUN	880	1150	1330	82	1510	1780	1622
COLUMBIA at Birchbank (1,2)	APR-SEP	41000	45700	47800	108	49900	54600	44390
	APR-JUL	32700	36500	38200	103	39900	43700	35440
	APR-JUN	23700	26500	27700	108	28900	31700	25650
COLUMBIA at Grand Coulee Dam (1,2)	APR-SEP	57100	64700	68200	103	71700	79300	66460
	APR-JUL	48000	54400	57300	103	60200	66600	55730
	APR-JUN	37400	42400	44700	103	47000	52000	43420
RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE : CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
		THIS YEAR	LAST YEAR	AVG.			LAST YR.	AVERAGE
ROOSEVELT	5232.0	3333.7	503.0	1586.0	Colville River	3	102	85
BANKS	715.0	709.6	664.2	583.0	Pend Oreille River	12	100	92
					Kettle River	11	90	84

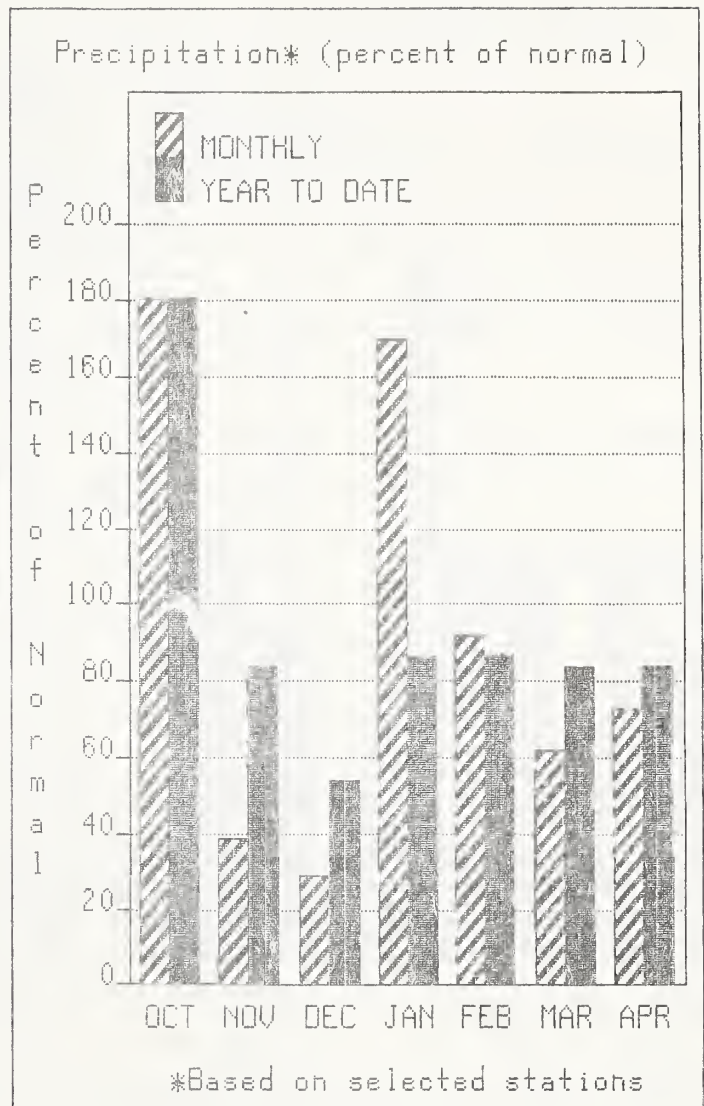
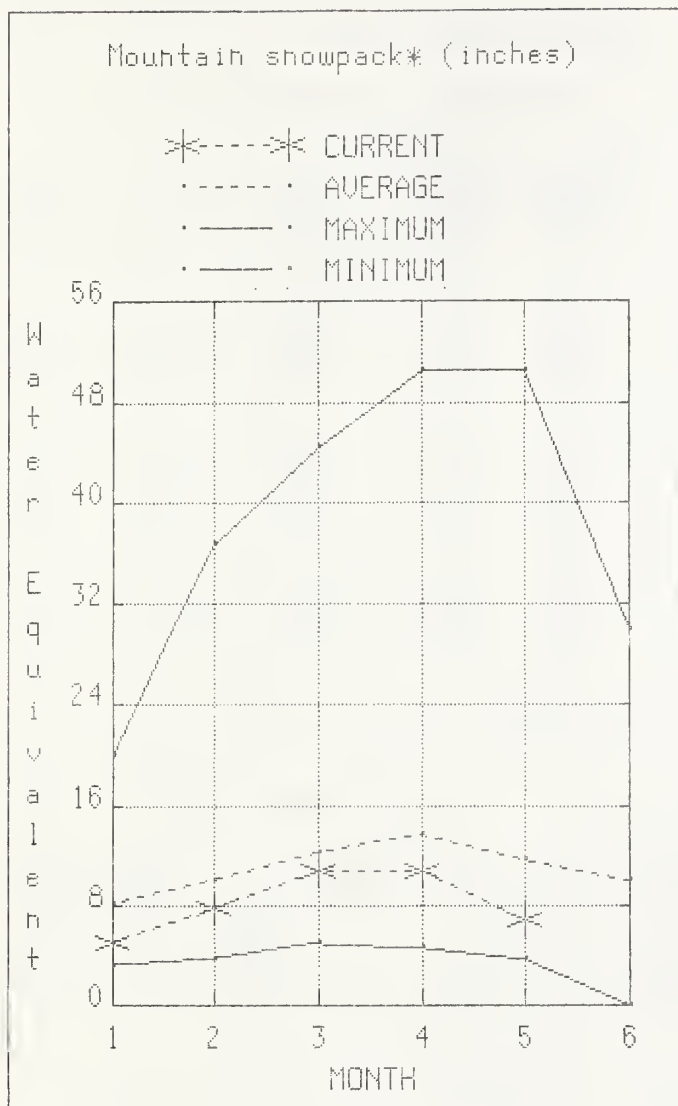
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The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

OKANOGAN AND METHOW



WATER SUPPLY OUTLOOK:

April streamflow on the Methow River was 178% of normal, 167% on the Okanogan River, and 285% on the Similkameen. Summer runoff for the area's small streams is expected to be below normal. May-September runoff forecasts for the Okanogan River is 67% of normal. The Similkameen River 65%, and the Methow River 80% of normal. May 1 snow cover was 59% of average on the Okanogan, down from 79% last month and 58% for the Methow Basin. April precipitation in the Okanogan-Methow was 73% of normal, with water year-to-date 84% of average. Temperatures were seven degrees above normal for the month. Snow water content at the Harts Pass SNOTEL, elevation 6500 feet, was 43.5 inches of water content in the pack. Storage in the Conconully Reservoirs is 17,100 acre feet, which is 73% of capacity and 107% of May 1 average.

For more information contact your local Soil Conservation Service office.

OKANOGAN - METHOW RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<----- DRIER ----- FUTURE CONDITIONS ----- WETTER ----->						
		CHANCE OF EXCEEDING *						
		90%	70%	50% (MOST PROBABLE)		30%	10%	25 YR.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
SIMILKAMEEN R. nr Nighthawk	APR-SEP	785	995	1140	80	1280	1500	1432
	APR-JUL	730	925	1060	80	1190	1390	1333
	APR-JUN	620	785	900	80	1010	1180	1128
OKANOGAN R. nr Tonasket	APR-SEP	700	1030	1260	76	1490	1820	1661
	APR-JUL	635	935	1140	76	1350	1650	1501
	APR-JUN	530	785	955	76	1130	1380	1255
METHOW RIVER nr Pateros	APR-SEP	625	780	880	90	980	1130	980
	APR-JUL	580	720	815	90	910	1050	907
	APR-JUN	490	610	690	90	770	890	769

RESERVOIR STORAGE

(1000AF)

WATERSHED SNOWPACK ANALYSIS

RESERVOIR	USEABLE :	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
	CAPACITY:	THIS	LAST	AVG.			-----	
	: YEAR	YEAR	YEAR				LAST YR.	AVERAGE
CONCONULLY LAKE (SALMON)	10.5	8.3	8.0	8.0	Okanogan River	30	89	79
CONCONULLY RESERVOIR	13.0	8.0	6.9	7.0	Methow River	4	97	79

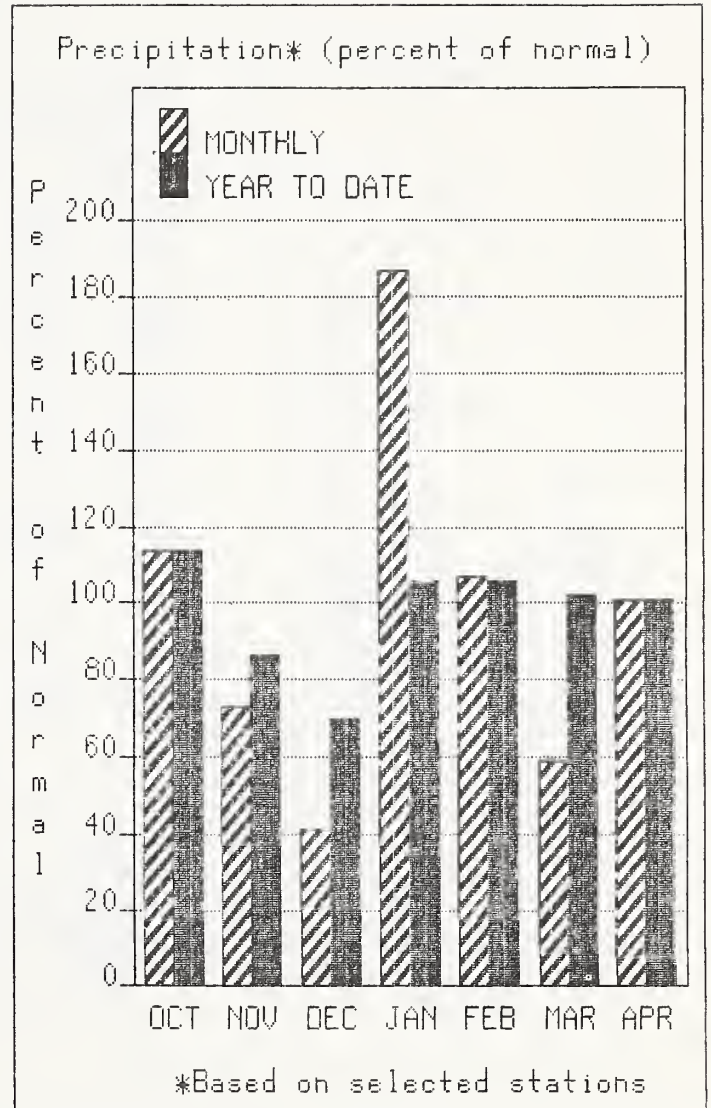
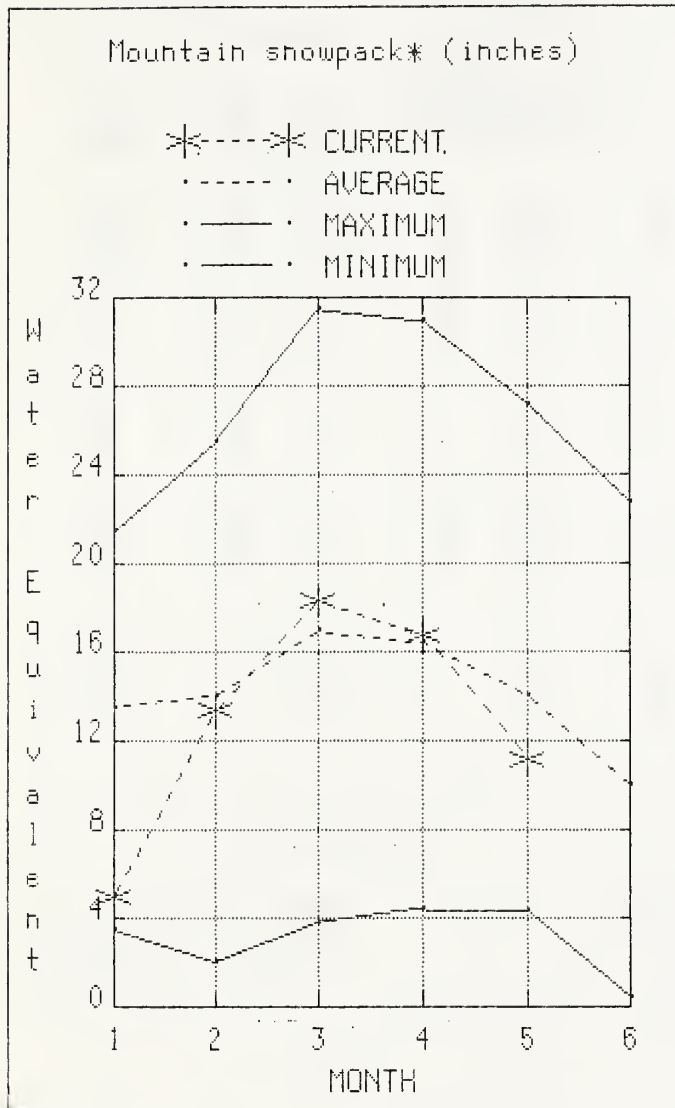
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The average is computed for the 1961-1985 base period.

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WENATCHEE AND CHELAN



WATER SUPPLY OUTLOOK:

SNOTEL sites in the Squilchuck-Stemilt drainage have lost their snowpack as of May 1. May 1 snowpack in the Wenatchee Basin is 80% of average down from 103% in April and 92% in the Chelan Basin down from 108%. Precipitation during April was 101% of normal in the basin and 101% from October 1 to May 1. Reservoir storage in Lake Chelan is 353,700 acre feet or 79% of May 1 average and 52% of capacity. Lyman Lake SNOTEL had the most snow water with 66.5 inches of water. Runoff for the Entiat River is forecast to be 80% of normal for the summer. Forecasts for the Chelan River are for 93%, Wenatchee River's runoff 87%, and 69% on the Squilchuck-Stemilt. Streamflow for April on the Wenatchee River and the Chelan River was 211% of normal.

For more information contact your local Soil Conservation Service office.

WENATCHEE - CHELAN RIVER BASINS

STREAMFLOW FORECASTS								
FORECAST POINT	FORECAST PERIOD	<----- DRIER -----		FUTURE CONDITIONS		----- WETTER ----->		25 YR. (1000AF)
		CHANCE OF EXCEEDING *						
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
CHELAN RIVER at Chelan (1)	APR-SEP	1050	1170	1220	103	1270	1390	1182
	APR-JUL	925	1020	1070	103	1120	1220	1040
	APR-JUN	650	780	840	103	900	1030	815
STEHEKIN R. at Stehekin	APR-SEP	750	805	840	100	875	930	844
	APR-JUL	630	680	710	99	740	790	714
	APR-JUN	475	510	535	99	560	595	541
ENTIAT RIVER nr Ardenvoir	APR-SEP	156	181	198	85	215	240	233
	APR-JUL	149	172	188	85	205	225	221
	APR-JUN	115	133	145	85	157	176	171
WENATCHEE R. at Peshastin	APR-SEP	1160	1470	1680	100	1890	2200	1678
	APR-JUL	1050	1330	1520	100	1710	1990	1516
	APR-JUN	845	1070	1220	100	1370	1590	1216
STEMILT nr Wenatchee (miners in)	MAY-SEP	53	79	97	70	115	141	138
ICICLE CREEK nr Leavenworth	APR-SEP	235	305	350	95	400	470	370
	APR-JUL	215	280	325	96	370	435	340
	APR-JUN	169	220	255	94	290	340	270
RESERVOIR STORAGE (1000AF)				WATERSHED SNOWPACK ANALYSIS				
RESERVOIR	USEABLE CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
		THIS YEAR	LAST YEAR	AVG.			LAST YR.	AVERAGE
CHELAN LAKE	676.1	235.8	200.6	212.1	Chelan Lake Basin	3	116	108
					Entiat River	2	84	70
					Wenatchee River	8	117	107
					Squilchuck Creek	1	73	100
					Stemilt Creek	2	67	59
					Colockum Creek	0	0	0

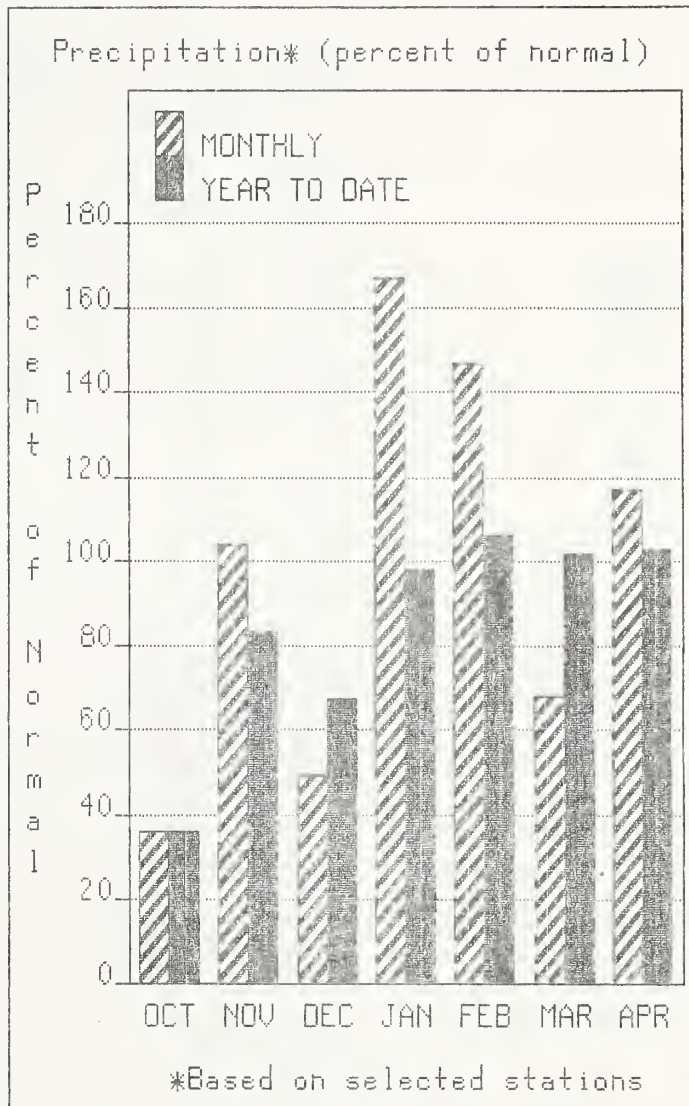
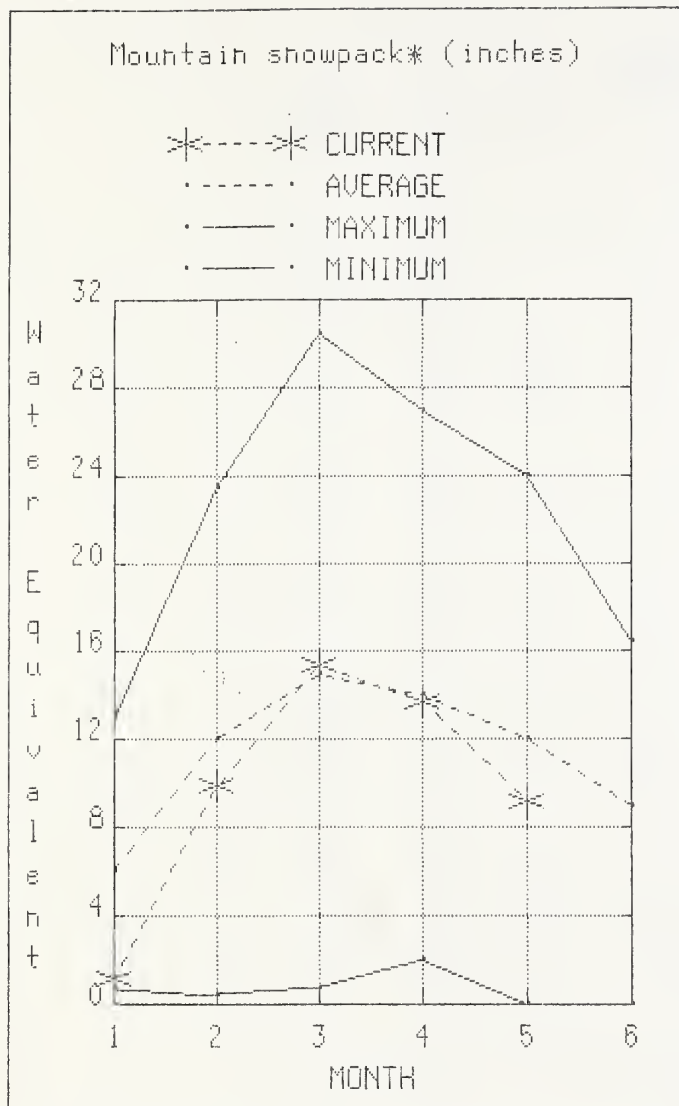
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YAKIMA



WATER SUPPLY OUTLOOK:

The outlook for irrigation water for the summer remains fair with May 1 reservoir storage for the five major reservoirs at 956,700 acre feet, up from 717,300 acre feet on April 1, the best since 1984. April precipitation was 117% of normal and 103% for the water year-to-date. May 1 streamflow forecasts for the Yakima Basin runoff vary throughout the basin as follows: the Yakima River at Cle Elum, 81%; Naches River, 74%; the Yakima River at Parker, 77%; Ahtanum Creek, 77%, and Tieton River 77%. April streamflow on the Yakima River at Parker was 177% of normal, and 199% on the Yakima near Cle Elum. Snowpack is 76% of average on May 1, down from 98% on April 1, in the Yakima Basin based upon 14 snow courses and SNOTEL readings. Temperatures were four degrees above average for April. Volume forecasts for the Yakima Basin are for natural flow. As such, they may differ from the U. S. Bureau of Reclamation's forecast for the total water supply available which includes adjustments for reservoir operation and irrigation return flow.

YAKIMA RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	FUTURE CONDITIONS						
		<----- DRIER ----->		----- WETTER ----->		CHANCE OF EXCEEDING *		
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)	25 YR. (1000AF)	
YAKIMA RIVER at Martin (1)	APR-SEP	112	121	126	93	132	139	136
	APR-JUL	103	112	117	93	122	129	126
	APR-JUN	92	100	104	93	109	114	112
YAKIMA RIVER at Cle Elum (2)	APR-SEP	855	910	950	100	990	1040	951
	APR-JUL	760	810	845	100	880	930	846
	APR-JUN	660	705	735	100	765	810	735
YAKIMA RIVER nr Parker (2)	APR-SEP	1470	1700	1860	90	2020	2250	2075
	APR-JUL	1320	1530	1670	90	1810	2020	1862
	APR-JUN	1170	1350	1480	90	1610	1790	1643
KACHESS RIVER nr Easton (1)	APR-SEP	116	124	130	98	136	144	133
	APR-JUL	96	107	112	98	117	128	114
	APR-JUN	86	96	100	98	105	114	102
CLE ELUM RIVER nr Roslyn (1)	APR-SEP	415	440	460	100	480	510	459
	APR-JUL	370	395	415	100	435	465	417
	APR-JUN	315	340	355	101	370	395	353
BUMPING RIVER nr Nile (1)	APR-SEP	103	128	139	100	150	175	139
	APR-JUL	95	118	128	100	138	161	128
	APR-JUN	79	98	106	100	115	133	106
AMERICAN RIVER nr Nile	APR-SEP	109	116	121	100	126	133	121
	APR-JUL	101	103	112	100	117	123	112
	APR-JUN	85	90	94	100	98	103	94
TIETON RIVER at Tieton (1)	APR-SEP	159	183	205	84	225	250	244
	APR-JUL	125	157	175	84	193	220	200
	APR-JUN	109	126	141	84	156	171	168
NACHES RIVER nr Naches (2)	APR-SEP	560	660	730	85	800	900	860
	APR-JUL	505	600	660	85	725	815	779
	APR-JUN	435	510	565	85	620	695	667
AHTANUM CREEK nr Tampico (2)	APR-SEP	19.0	29	36	77	43	53	47
	APR-JUL	18.0	27	33	77	39	48	43
	APR-JUN	15.0	23	28	76	33	41	37

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE CAPACITY: THIS YEAR	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE	
		LAST YEAR	AVG.					
KEECHULUS	157.8	135.0	118.6	110.0	Yakima River	20	100	98
KACHESS	239.0	170.1	115.2	187.0	Ahtanum Creek	2	61	73
CLE ELUM	436.9	255.1	249.7	290.0				
BUMPING LAKE	33.7	12.3	11.4	11.0				
RIMROCK	198.0	144.8	110.7	142.0				

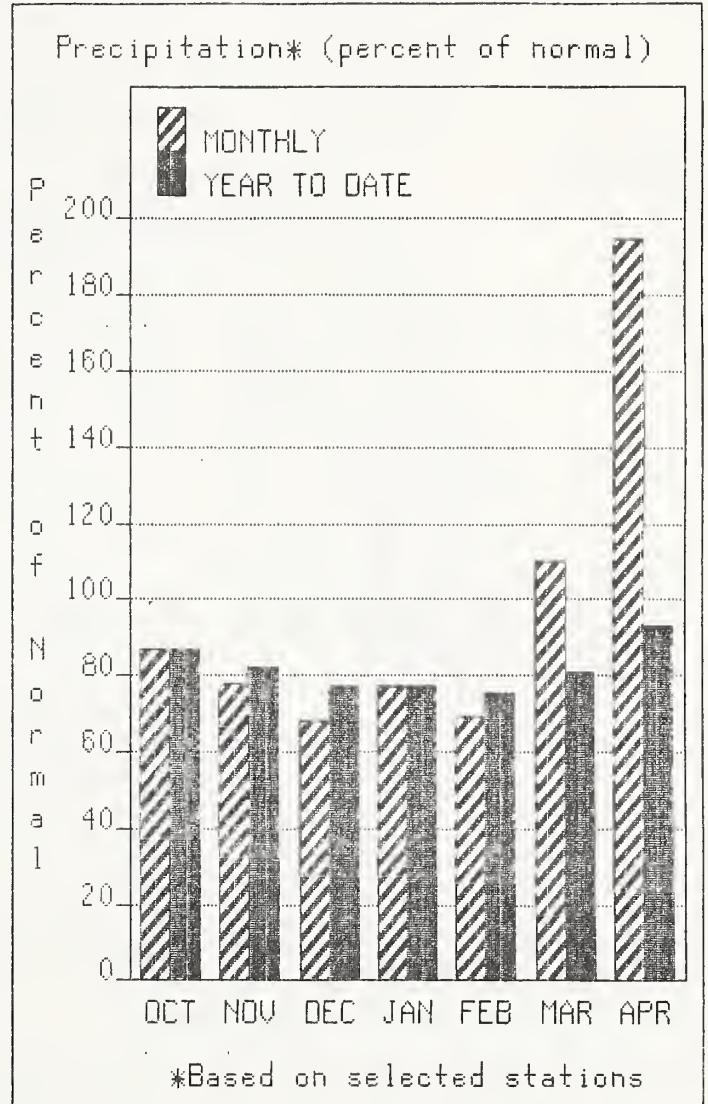
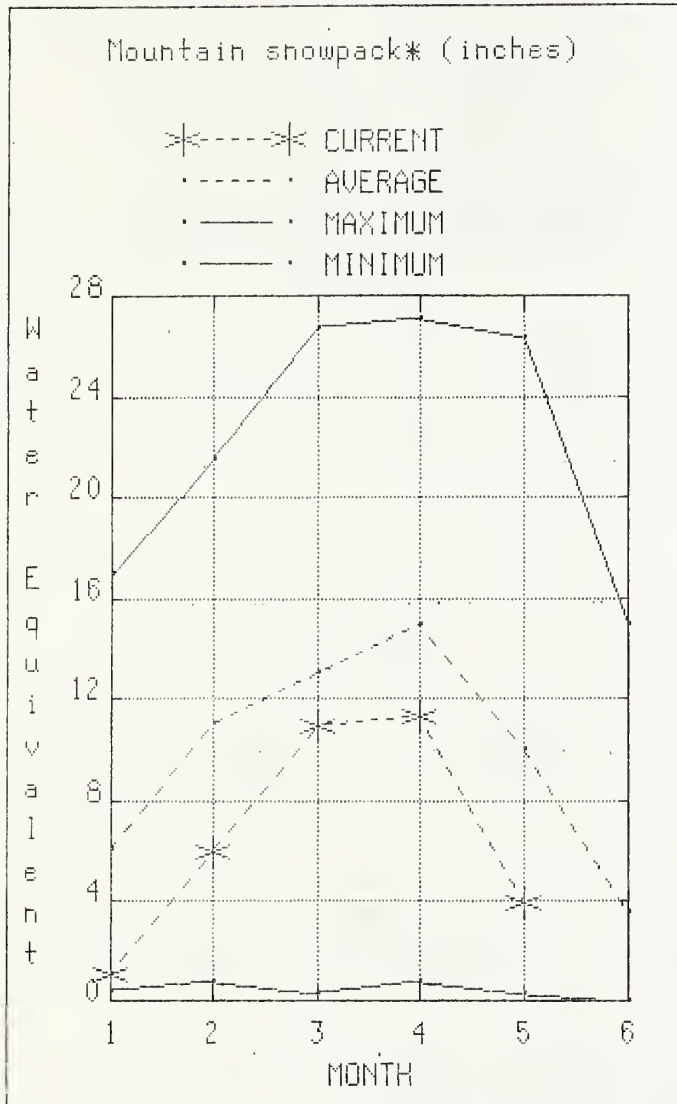
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(2) - The value is natural flow - actual flow may be affected by upstream water management.

WALLA WALLA



WATER SUPPLY OUTLOOK:

May 1 water content at the Touchet SNOTEL site was 20.1 inches. The forecast is for 63% of average streamflow in the Walla Walla River for the coming summer, and 58% for Mill Creek. April streamflow was 114% of normal on the Walla Walla River. April precipitation was 195% of average bringing the water year-to-date precipitation to 93% of normal. There were 2.63 inches of precipitation recorded at the Walla Walla for April. Temperatures were seven degrees above average for April.

For more information contact your local Soil Conservation Service office.

WALLA WALLA RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div> <div><----- DRIER -----</div> <div>FUTURE CONDITIONS</div> <div>----- WETTER -----></div> </div>						
		CHANCE OF EXCEEDING *						
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	25 YR. (1000AF)
MILL CREEK at Walla Walla	APR-SEP	5.0	8.6	11.0	62	13.4	17.0	17.7
	APR-JUL	4.8	8.4	10.8	61	13.2	16.8	17.6
	APR-JUN	4.8	8.3	10.7	62	13.1	16.6	17.3
SF WALLA WALLA nr Milton Freewater	APR-JUL	29	33	36	65	39	42	55

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE : CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
	: YEAR	THIS YEAR	LAST YEAR	AVG.			
					Mill Creek	1	44 49

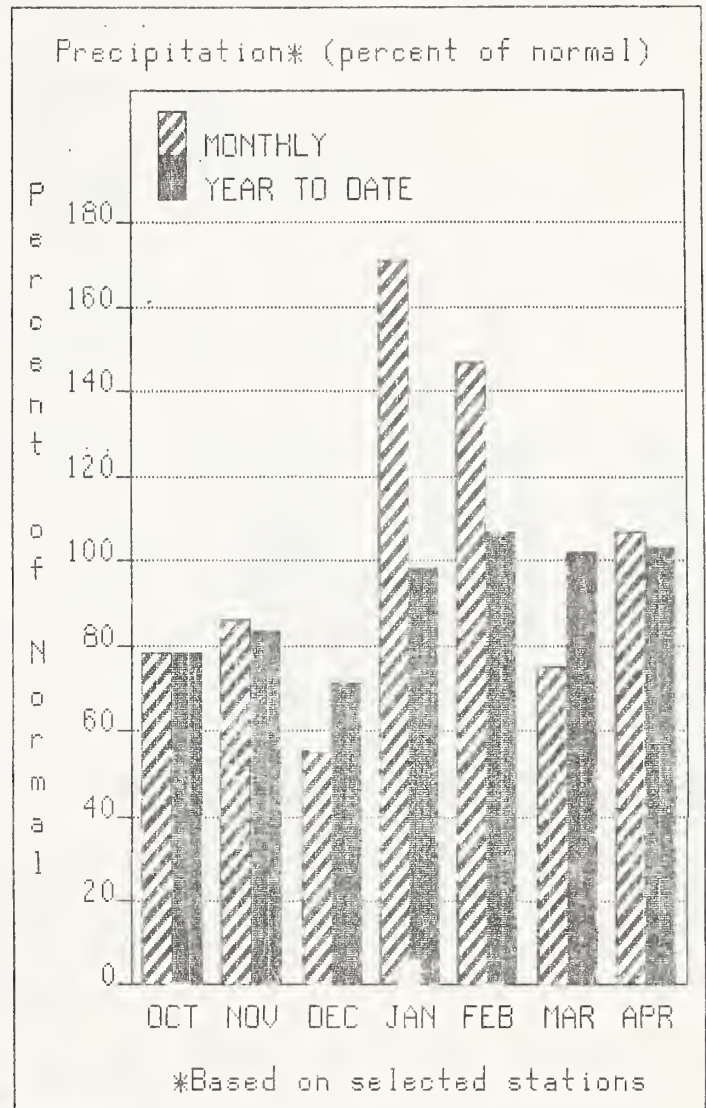
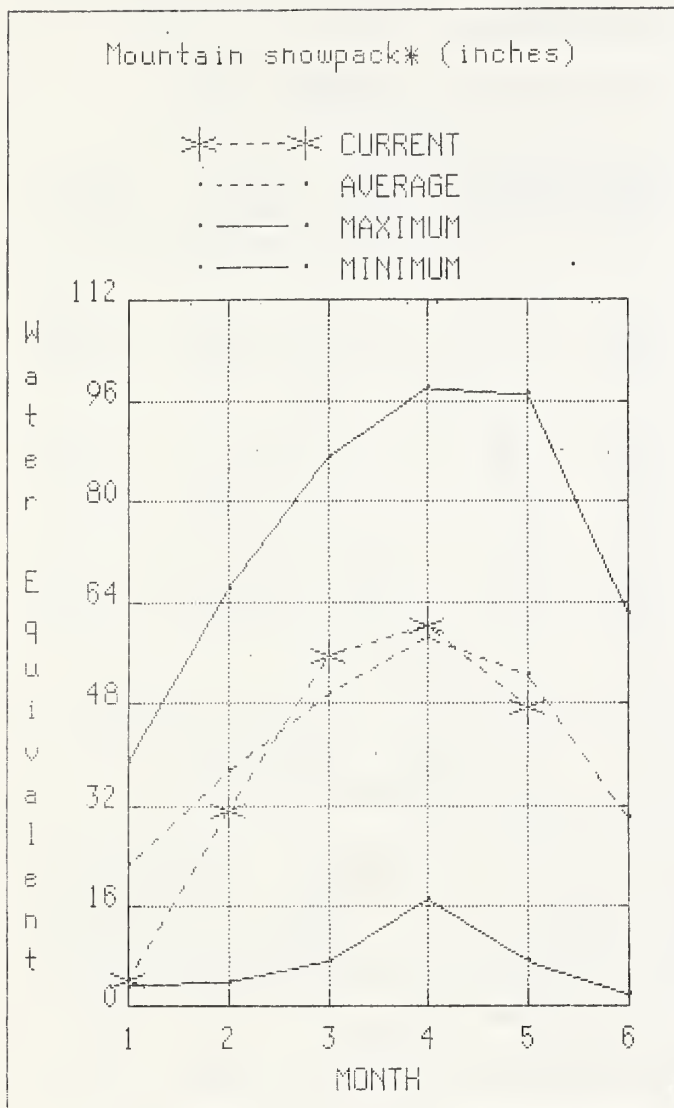
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(2) - The value is natural flow - actual flow may be affected by upstream water management.

COWLITZ AND LEWIS



WATER SUPPLY OUTLOOK:

April streamflow on the Lewis River was 107% of normal and on the Cowlitz River it was 155%. May 1 snow cover for the Cowlitz-Lewis Basin is 93% of normal, down from 103% on April 1. Summer runoff forecasts for the Lewis River are 86% and for the Cowlitz River, 90%. April precipitation was 107% of normal bringing the water year-to-date precipitation to 103% of average. The Paradise Park SNOTEL has the maximum water content for the basin with 74.4 inches of water, normal May 1 water content is 73.3 inches. Temperatures were three degrees above normal for April.

For more information contact your local Soil Conservation Service office.

COWLITZ - LEWIS RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	FUTURE CONDITIONS							
		<----- DRIER ----->		FUTURE CONDITIONS		----- WETTER ----->		25 YR. (1000AF)	
		CHANCE OF EXCEEDING *							
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)		
LEWIS RIVER at Ariel (2)	APR-SEP	825	1030	1160	93	1290	1490	1244	
	APR-JUL	710	980	1000	92	1120	1290	1094	
	APR-JUN	625	775	880	92	985	1140	958	
COWLITZ R. bl Mayfield Dam (2)	APR-SEP	975	1520	1840	90	2160	2710	2036	
	APR-JUL	890	1330	1610	90	1890	2330	1782	
	APR-JUN	780	1130	1370	90	1610	1960	1524	
COWLITZ R. at Castle Rock (2)	APR-SEP	1450	2250	2640	98	3030	3840	2687	
	APR-JUL	1310	1960	2300	98	2640	3280	2343	
	APR-JUN	1260	1690	1980	98	2270	2700	2015	

RESERVOIR STORAGE (1000AF)

WATERSHED SNOWPACK ANALYSIS

RESERVOIR	USEABLE : ** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
	CAPACITY:	THIS	LAST			LAST YR.	AVERAGE
		YEAR	YEAR				
			AVG.	Cowlitz River	7	94	108
				Lewis River	4	80	94

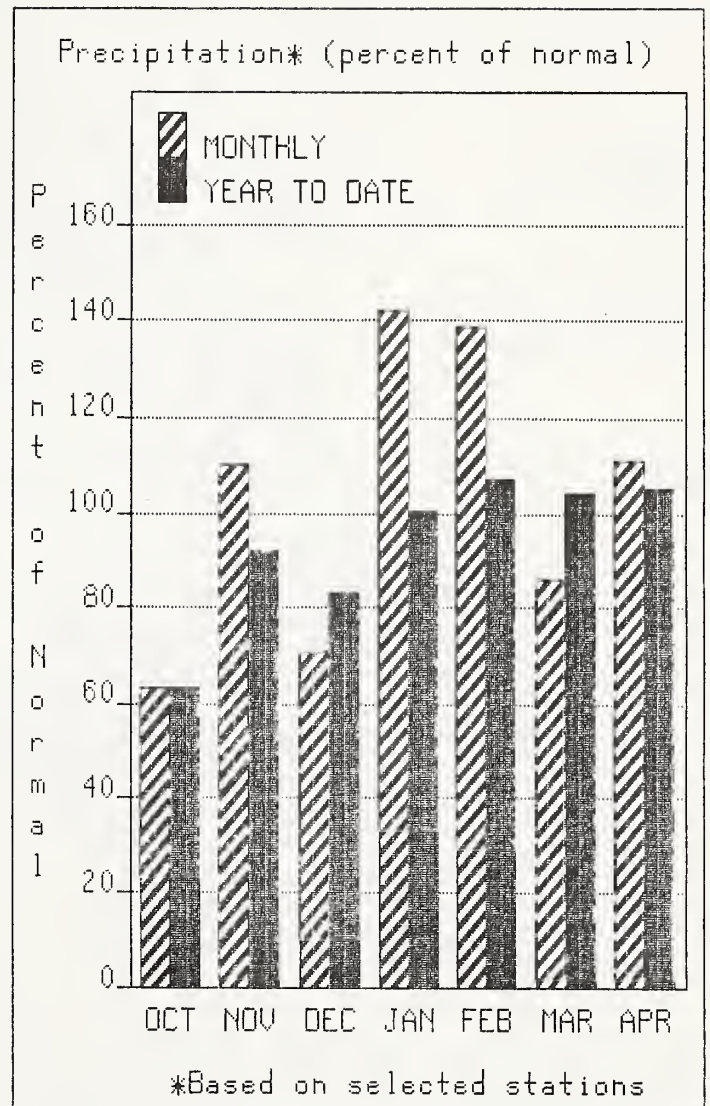
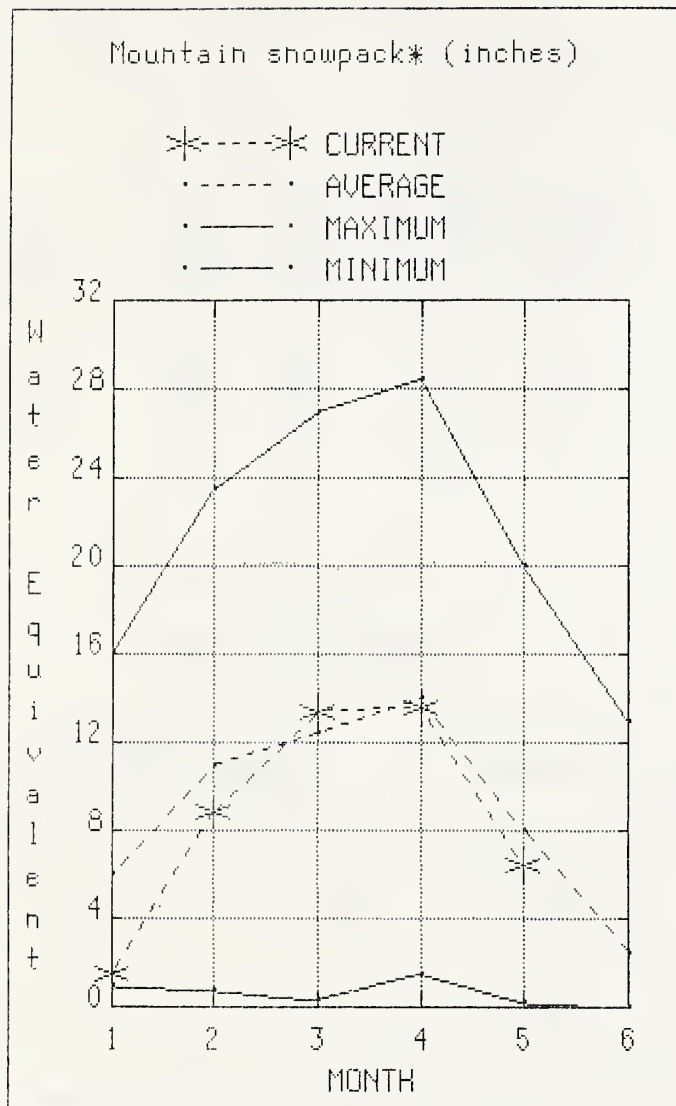
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(2) - The value is natural flow - actual flow may be affected by upstream water management.

WHITE - GREEN



WATER SUPPLY OUTLOOK:

May 1 snowpack was 84% of normal on the Green River and 80% of average on the White River. April precipitation was 111% of normal, bringing the water year-to-date to 103% of average. Summer runoff is forecasted to be 90% on the Green River, and 95% of normal on the Cedar River. Water content on May 1 at the Stampede Pass SNOTEL, at an elevation of 3860 feet, was 45.66 inches, this site has a April 1 average of 38.7 inches. Temperatures were three degrees above average for April.

For more information contact your local Soil Conservation Service office.

WHITE - GREEN RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div> <div><----- DRIER -----</div> <div>FUTURE CONDITIONS</div> <div>----- WETTER -----></div> </div>						
		CHANCE OF EXCEEDING *						
		90%	70%	50% (MOST PROBABLE)		30%	10%	25 YR.
		(1000AF)	(1000AF)	(1000AF) (% AVG.)		(1000AF)	(1000AF)	(1000AF)
GREEN R bl Howard Hanson Dam (2)	APR-SEP	215	250	275	95	300	335	291
	APR-JUL	198	230	250	96	270	300	261
	APR-JUN	178	205	225	95	245	270	236
CEDAR RIVER nr Cedar Falls	APR-SEP	75	86	93	100	101	112	93

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
		THIS YEAR	LAST YEAR	AVG.			
					White River	3	90 95
					Green River	7	89 101
					Cedar River	2	64 78

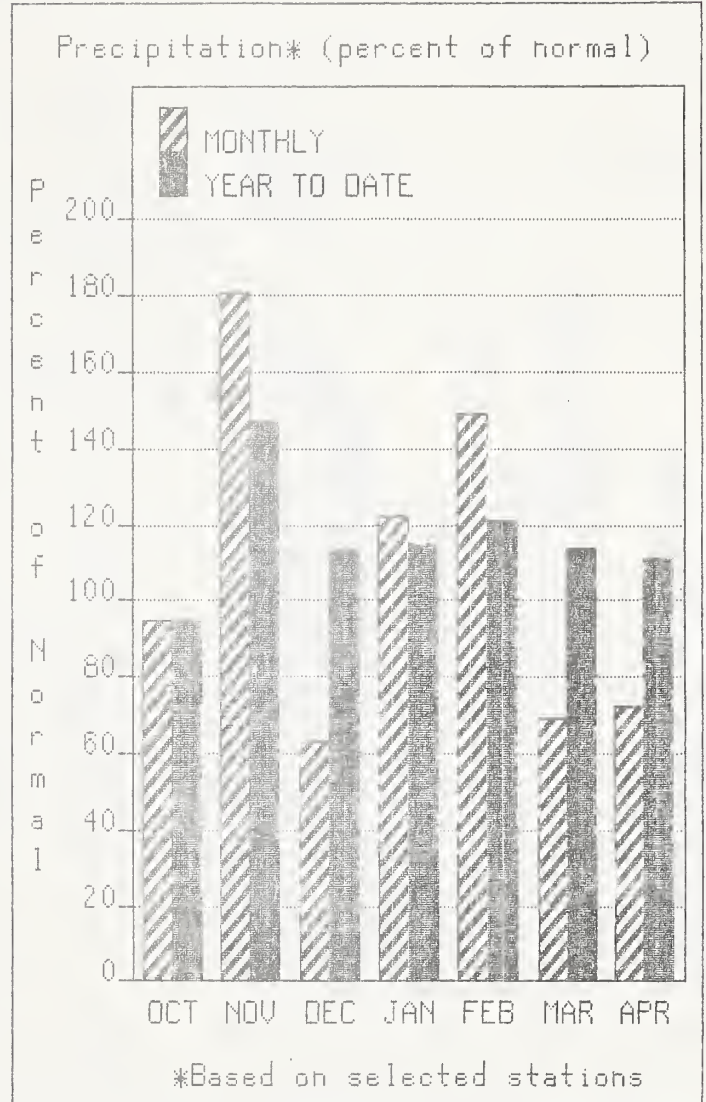
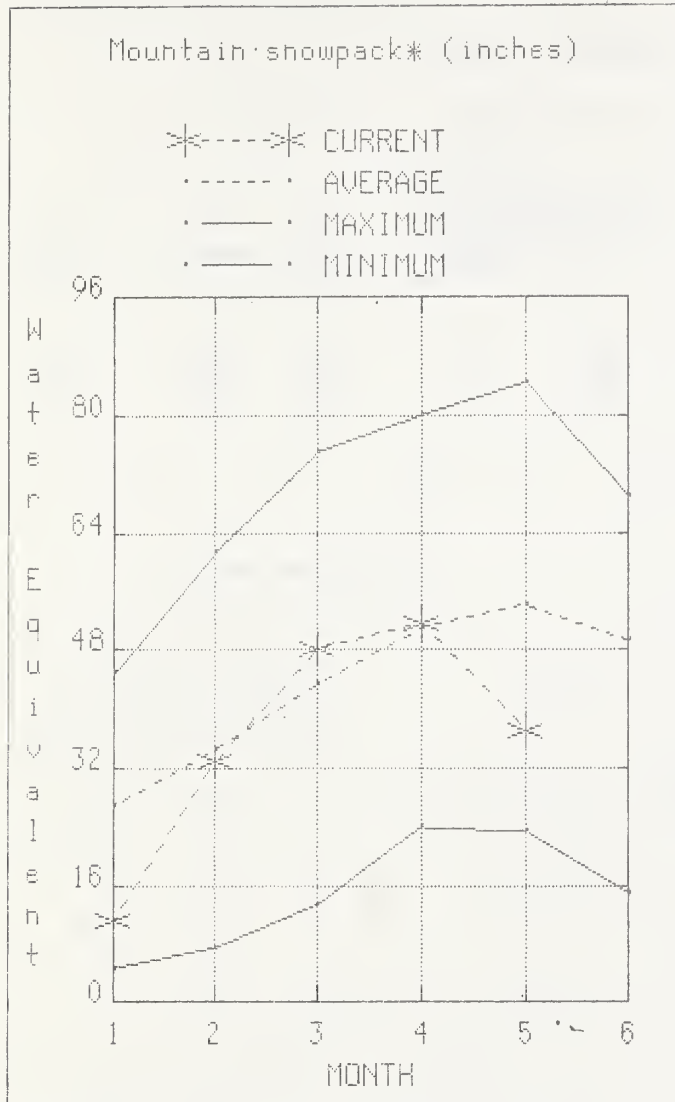
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

NORTH PUGET SOUND



WATER SUPPLY OUTLOOK:

April streamflow in the Skagit River was 166% of average. Forecast for the Skagit River is 88% of normal for the spring and summer period. May 1 snow cover in the Skagit Basin is 81% of normal, and in the Baker River 57%. Jasper Pass aerial snow marker at elevation of 5400 feet, has 65.1 inches of water content; normal May 1 water content is 93 inches. May 1 reservoir storage is above average, with Ross Lake reservoir at 118% of normal and 54% of capacity. Precipitation values for April were 72% of average with a water year-to-date at 111% of normal. April temperatures were three degrees above normal.

For more information contact your local Soil Conservation Service office.

NORTH PUGET SOUND RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div> <div><----- DRIER -----</div> <div>FUTURE CONDITIONS</div> <div>----- WETTER -----></div> </div>						
		CHANCE OF EXCEEDING *						
		90%	70%	50% (MOST PROBABLE)		30%	10%	25 YR.
		(1000AF)	(1000AF)	(1000AF) (% AVG.)		(1000AF)	(1000AF)	(1000AF)
SKAGIT RIVER at Newhalem (2)	APR-SEP	1740	1950	2100	93	2250	2460	2264
	APR-JUL	1420	1600	1720	91	1840	2020	1891
	APR-JUN	1080	1220	1310	91	1400	1540	1442

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
		THIS YEAR	LAST YEAR	AVG.			LAST YR.	AVERAGE
ROSS	1404.1	595.8	703.9	298.0	Snoqualmie River	2	97	92
DIABLO RESERVOIR	90.6	87.5	86.6	---	Skykomish River	3	114	124
GORGE RESERVOIR	9.8	8.2	7.6	---	Skagit River	13	117	101
					Baker River	9	110	98

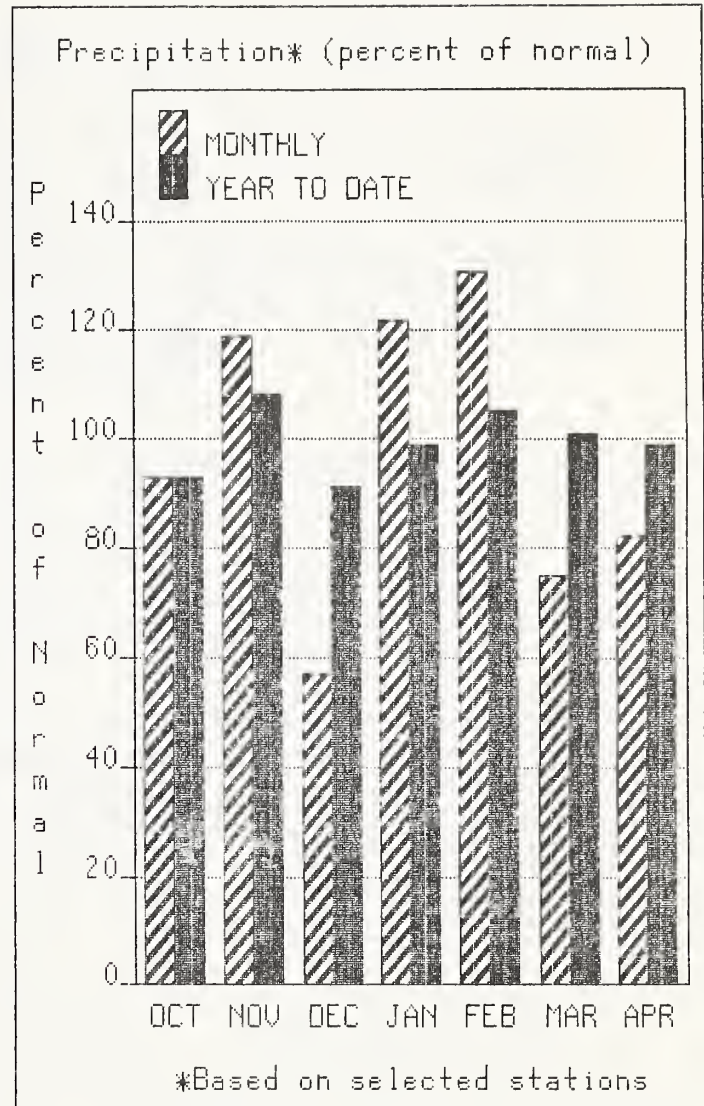
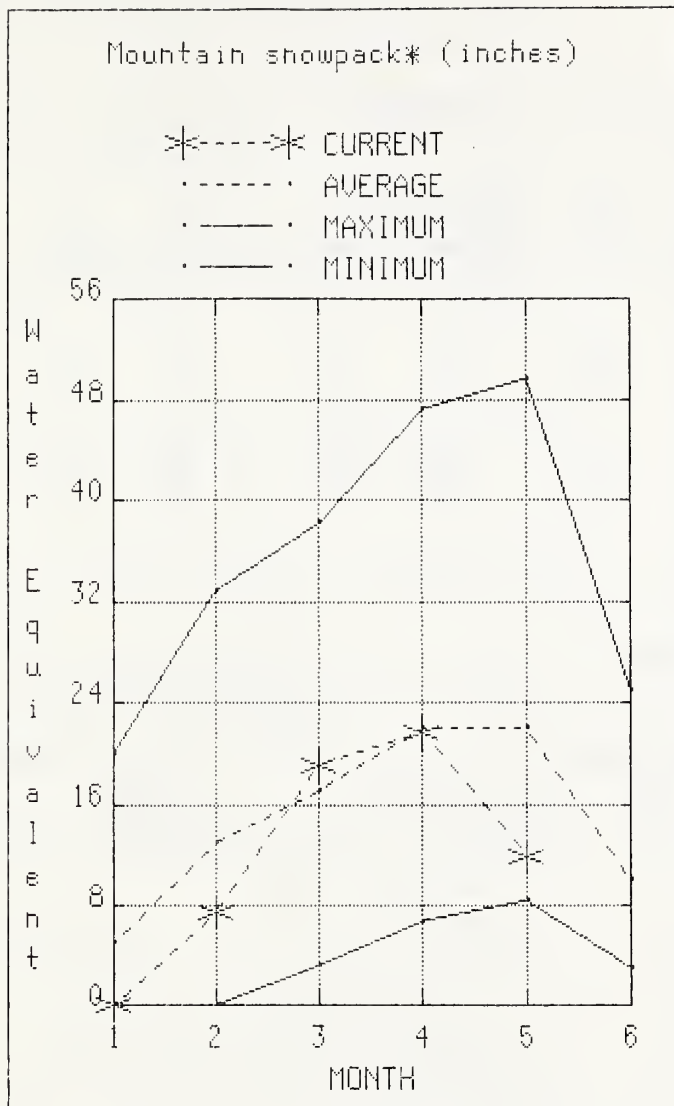
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

OLYMPIC



WATER SUPPLY OUTLOOK:

May forecasts of runoff for streamflow in the basin are for 88% of average on the Dungeness River and 90% for the Elwah River. Precipitation for April was 82% of average, with Quillayute receiving 5.51 inches. The basin water year-to-date precipitation accumulation is 99% of normal. May 1 snowpack in the Olympic Basin was 67% of average, down from 94% of normal on April 1. The Mount Craig SNOTEL near Quilcene had a May 1 snow water content of 13.2 inches of water, down from 22.7 inches on April 1. Temperatures were three degrees above normal for April.

For more information contact your local Soil Conservation Service office.

OLYMPIC PENINSULA RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div> <div><----- DRIER -----</div> <div>FUTURE CONDITIONS</div> <div>----- WETTER -----></div> </div>						
		CHANCE OF EXCEEDING *						
		90%	70%	50% (MOST PROBABLE)		30%	10%	25 YR.
		(1000AF)	(1000AF)	(1000AF) (% AVG.)		(1000AF)	(1000AF)	(1000AF)
DUNGENESS RIVER nr Sequim	APR-SEP	110	125	135	85	145	160	159
	APR-JUL	89	101	109	84	117	130	129
	APR-JUN	66	75	81	84	87	96	97
ELWA RIVER nr Port Angeles	APR-SEP	395	450	485	88	520	575	553
	APR-JUL	325	365	395	87	425	465	454

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE ;	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF
	CAPACITY:	THIS YEAR	LAST YEAR	AVG.			LAST YR. AVERAGE
					Elwha River	1	109 94
					Morse Creek	1	108 97
					Dungeness River	1	113 87
					Quilcene River	0	0 0
					Wynoochee River	1	70 112

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

CONSERVE YOUR IRRIGATION WATER

Can irrigators use less water and get good yields? We think so. With energy costs on an upward spiral and water shortages likely, we offer these water saving ideas to irrigators.

Consider ditch lining or gated pipe. This will reduce the 10-90% loss which occurs in earth ditches.

Keep ditches clean and free from weeds, sediment or other debris, which can slow water velocity, affect delivery rate, and increase evaporation.

Make sure head gates, drop structures, and pipe inlets are operational. A washed out structure is water lost.

Inspect ditch banks for rodent damage. Rodent holes cause leakage or failures.

Make sure sprinkler nozzles are not worn or leaky. Check pipe connections and valves to prevent leaks.

Operate sprinklers at recommended pressure to effectively use available water.

Maintain your pump at peak efficiency to save energy.

BETTER WATER MANAGEMENT

Better water management may require more labor. It may require changing a head of water in the middle of the night. But it will be worth it. You should:

Measure your water to determine how much is applied.

Consider alternate row irrigation for crops planted in furrows.

Plan short runs. Match stream size and velocity to soil intake rate and capacity.

Catch and reuse tail water where possible.

Under irrigate the lower end of the field to stretch your water.

When water is short, consider eliminating that last irrigation.

Soil Conservation Service personnel can:

Help plan and design new irrigation systems or evaluate existing ones. Provide technical assistance for land leveling, pipeline installation, and other practices.

KNOW YOUR SOILS

Soil absorbs irrigation water at a given rate. This varies with each soil type. Some crops require more water than others. Check soil moisture by spade, probe, or moisture meter. Or use the "feel" method.

WHEN IRRIGATION IS NEEDED SOIL WILL FEEL AND ACT THIS WAY

Soil Texture	A handful of soil will
Coarse	Tend to stick together slightly, but will not form a ball
Medium	Be crumbly, but will form a ball
Fine	be pliable, and will form a ball.

If you have a conservation plan on your farm, or if the soil in your area has been mapped, the Soil Conservation Service can crosscheck soil type and irrigation data and provide you with the water holding capacity of your soil for a given crop.

RANCHING TIPS FOR WATER-SHORT YEARS

Forage production on range and dry pasture depends entirely on natural moisture. While overgrazing does damage to perennial plants during a season of normal moisture, it is more severe during a drought year. It reduces plant vigor, stops root and leaf growth, reduces ground cover, and invites accelerated erosion. Once erosion begins, it gets worse each year, further reducing plant vigor and forage production. This process is difficult to reverse.

Rather than risk permanent damage to grazing resources start planning a strategy early. For example:

- reduce livestock numbers to balance with forage supply
- cull herds more than normal
- sell calves and lambs early
- determine forage needs and buy needed supplements early
- grow small grains or sorghums for hay or pasture (these use less water than conventional forage crops)
- defer planting perennial pasture, hay or range seedings until a year with more favorable water outlook
- keep spring developments, stock tanks, float valves and pipeline in good working order so water is not wasted
- use evaporation retardant on ponds and tanks
- prepare for hauling stock water
- give spring development high priority (even mediocre springs will be helpful)
- check with local SCS and ASCS offices to learn if cost-share programs are available to help with spring developments or other water conservation practices
- don't overgraze or otherwise disturb streambank vegetation (it will help prevent erosion, reduce sediment, and provide food and cover for wildlife)

Remember, if a unit must be abused, well-established seedings can tolerate overgrazing better than native range.

Wildlife will suffer during a drought as much or more than domestic livestock. The wildlife that share your land is a valuable natural resource.

To help wildlife:

- include features at stock water developments which will allow small animals and birds safe access to water (these are usually not expensive and are easily installed)
- fence ponds and springs and install collector pipes to deliver water to a tank or trough. This will improve water quality and quantity for livestock, as well as provide lush vegetation for small animals and birds.

Other places for information or assistance:

- check with local ASCS office for possible special practices or cost-sharing that might assist with irrigation on your farm or ranch this year.
- maintain contact with Farmers Home Administration for special local programs available.
- maintain contact with the local Cooperative Extension Service office for agricultural and marketing conditions.

If you belong to an irrigation district, contact irrigation officials throughout the season to learn about current water availability and water supply forecasts.

For more information concerning your crop, and soil and water conditions, contact the local Conservation District Office.

Basin Outlook Reports

and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

Local Soil Conservation Service Field Office or Bill Weller
Water Supply Specialist
Soil Conservation Service
Spokane, WA 99201
(509) 353-2341

How forecasts are made

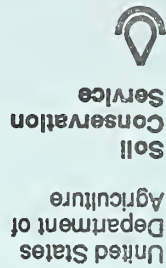
Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Soil Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

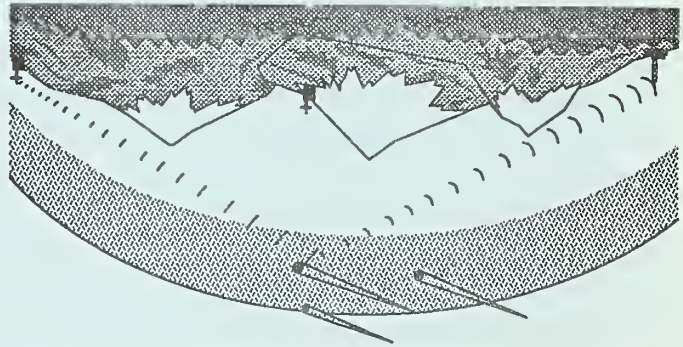
Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

All programs and services of the USDA Soil Conservation Service, are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

Soil Conservation Service
W 920 Riverside, Room 360
Spokane, Washington 99201-1080



Basin Outlook Reports



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In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209-3489.

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5/1990

ERRATA SHEET

MAY, 1990

WATER SUPPLY OUTLOOK REPORT

FOR

WASHINGTON

SORRY FOR ANY INCONVENIENCE THIS MAY HAVE CASUED YOU.

SPOKANE RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	FUTURE CONDITIONS						
		DRIER			WETTER			
		CHANCE OF EXCEEDING *						
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	25 YR. (1000AF)

SPOKANE nr Post Falls (1,2)	MAY-SEP	875	1300	1490	76	1680	2110	1957
	MAY-JUL	815	1220	1400	75	1580	1990	1859
SPOKANE at Long Lake (2)	MAY-JUL	1150	1420	1610	77	1800	2070	2097

RESERVOIR STORAGE		(1000AF)			WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **			WATERSHED	NO. COURSES AUG'D	THIS YEAR AS % OF	
		THIS YEAR	LAST YEAR	AVG.			LAST YR.	AVERAGE
COEUR D'ALENE	291.2	392.2	391.2	317.2	Spokane River	12	92	68

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

COLVILLE - PEND OREILLE RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	DRIER		FUTURE CONDITIONS		WETTER		25 YR. (1000AF)
		90%	70%	50% (MOST PROBABLE)	CHANCE OF EXCEEDING *	30%	10%	
		(1000AF)	(1000AF)	(1000AF) (% AVG.)		(1000AF)	(1000AF)	
PEND OREILLE b1 Box Canyon (1,2)	MAY-SEP	7330	9650	10700	82	11800	14100	13100
	MAY-JUL	6610	8700	9650	82	10600	12700	11840
	MAY-JUN	5560	7310	8100	82	8890	10600	9879
CHAMOKANE CK nr Long Lake	MAY-AUG	4.0	6.8	8.8	79	10.8	13.6	11.1
	JUL-AUG	3.0	3.3	3.4	92	3.5	3.8	3.7
COLVILLE at Kettle Falls	MAY-SEP	35	55	68	76	81	101	80
	MAY-JUL	30	47	59	76	71	88	78
	MAY-JUN	27	42	52	76	62	77	68
KETTLE nr Laurier	MAY-SEP	935	1110	1230	75	1350	1520	1644
	MAY-JUL	865	1030	1140	74	1250	1420	1545
	MAY-JUN	765	910	1010	74	1110	1250	1362
COLUMBIA at Birchbank (1,2)	MAY-SEP	34900	41200	44000	106	46800	53100	41540
	MAY-JUL	27000	31900	34100	105	36300	41200	32600
	MAY-JUN	18900	22300	23900	105	25500	28900	22800
COLUMBIA at Grand Coulee Dam (1,2)	MAY-SEP	51800	57100	59500	100	61900	67200	59780
	MAY-JUL	42100	46400	48400	99	50400	54700	49060
	MAY-JUN	31700	34900	36400	99	37900	41100	36760

RESERVOIR STORAGE

(1000AF)

WATERSHED SNOWPACK ANALYSIS

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
		THIS YEAR	LAST YEAR	AVG.			LAST YR.	AVERAGE
ROOSEVELT	5232.0	3666.8	1618.5	1310.0	Colville River	0	0	0
BANKS	715.0	685.5	576.2	435.0	Pend Oreille River	11	95	75
					Kettle River	7	90	69

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

WENATCHEE - CHELAN RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	FUTURE CONDITIONS						
		DRIER		CHANCE OF EXCEEDING *		WETTER		25 YR. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
CHELAN RIVER at Chelan (1)	MAY-SEP	815	925	1000	93	1050	1180	1070
	MAY-JUL	710	810	865	93	920	1020	921
	MAY-JUN	535	610	655	93	700	780	707
STEHEKIN R. at Stehekin	MAY-SEP	660	705	735	95	765	810	775
	MAY-JUL	545	585	610	95	635	675	640
	MAY-JUN	405	430	450	95	470	495	473
ENTIAH RIVER nr Ardenvoir	MAY-SEP	142	161	174	80	187	205	217
	MAY-JUL	129	146	158	81	170	187	195
	MAY-JUN	103	117	126	81	135	149	155
WENATCHEE R. at Peshastin	MAY-SEP	800	1090	1290	87	1490	1780	1489
	MAY-JUL	735	995	1170	88	1350	1600	1327
	MAY-JUN	570	770	905	88	1040	1240	1027
STEMILT nr Wenatchee (miners in)	MAY-SEP	50	77	95	69	113	140	138
ICICLE CREEK nr Leavenworth	APR-SEP	210	280	330	89	380	450	370
	APR-JUL	174	260	305	90	350	415	340
	APR-JUN	152	205	240	89	275	330	270
COLUMBIA R. bl Rock Island Dam (2)	MAY-SEP	57000	61200	64100	99	67000	71200	65060
	MAY-JUL	46600	50100	52500	97	54900	58400	53860
	MAY-JUN	34900	37500	39300	97	41100	43700	40550

RESERVOIR STORAGE		(1000AF)			WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
		THIS YEAR	LAST YEAR	AVG.			LAST YR.	AVERAGE
CHELAN LAKE	676.1	353.7	255.0	448.8	Chelan Lake Basin	3	101	92
					Entiat River	1	0	0
					Wenatchee River	0	109	83
					Squilchuck Creek	0	0	0
					Stemilt Creek	1	0	0
					Colockum Creek	1	0	0

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

OKANOGAN - METHOW RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	DRIER		FUTURE CONDITIONS		WETTER		25 YR (1000AF)
		90%	70%	50% (MOST PROBABLE)		30%	10%	
		(1000AF)	(1000AF)	(1000AF) (% AVG.)		(1000AF)	(1000AF)	
SIMILKAMEEN R. nr Nighthawk	MAY-SEP	610	765	875	65	985	1140	1345
	MAY-JUL	550	695	795	64	895	1040	1246
	MAY-JUN	465	585	670	64	755	875	1040
OKANOGAN R. nr Tonasket	MAY-SEP	790	930	1030	67	1130	1270	1527
	MAY-JUL	695	820	910	67	1000	1130	1387
	MAY-JUN	560	670	740	66	810	920	1123
METHOW RIVER nr Pateros	MAY-SEP	505	635	720	80	805	935	898
	MAY-JUL	460	575	655	79	735	850	824
	MAY-JUN	380	480	545	79	610	710	687

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE CAPACITY	USEABLE STORAGE			WATERSHED	NO. COURSES AVG'S	THIS YEAR VS % OF LAST YR. AVERAGE
		THIS YEAR	LAST YEAR	AVG.			
CONDONULLY LAKE (SALMON)	10.5	8.5	8.1	8.0	Okangogan River	29	83 59
CONDONULLY RESERVOIR	13.0	8.6	8.1	8.0	Methow River	4	83 58

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1995 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be effected by upstream water management.

WALLA WALLA RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	FUTURE CONDITIONS						25 YR. (1000AF)
		DRIER		CHANCE OF EXCEEDING *		WETTER		
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
SF WALLA WALLA nr Milton Freewater	MAY-JUL	17.0	21	23	59	25	29	30
COLUMBIA R. at The Dalles (2)	MAY-SEP	64300	71200	75800	85	80400	87300	88790
	MAY-JUL	53200	58900	62800	85	66700	72400	74070
	MAY-JUN	41400	45800	48800	85	51800	56200	57430

RESERVOIR STORAGE		(1000AF)		WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **		WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
		THIS YEAR	LAST YEAR			LAST YR.	AVERAGE
				Mill Creek	1	0	0

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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(2) - The value is natural flow - actual flow may be affected by upstream water management.

YAKIMA RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	DRIEF ----- FUTURE CONDITIONS ----- WETTER -----						
		CHANCE OF EXCEEDING *						
		90%	70%	50% (MOST PROBABLE)	30%	10%	25 YR.	
		(1000AF)	(1000AF)	(1000AF) (% AVG.)	(1000AF)	(1000AF)	(1000AF)	
YAKIMA RIVER at Martin (1)	MAY-SEP	80	92	97	89	102	114	109
	MAY-JUL	75	85	90	90	95	105	100
	MAY-JUN	63	72	76	89	80	86	85
YAKIMA RIVER at Cle Elum (2)	MAY-SEP	535	595	635	81	675	735	786
	MAY-JUL	455	510	545	80	580	635	682
	MAY-JUN	380	425	455	80	485	530	570
YAKIMA RIVER nr Parker (2)	MAY-SEP	985	1170	1300	77	1430	1620	1682
	MAY-JUL	875	1040	1150	78	1260	1430	1469
	MAY-JUN	740	880	975	78	1070	1210	1250
KACHESS RIVER nr Easton (1)	MAY-SEP	70	83	89	82	95	108	108
	MAY-JUL	58	69	74	83	79	90	89
	MAY-JUN	50	60	64	83	68	78	77
CLE ELUM RIVER nr Roslyn (1)	MAY-SEP	270	310	330	84	350	390	393
	MAY-JUL	245	285	300	85	315	355	353
	MAY-JUN	200	230	245	85	260	290	289
BUMPING RIVER nr Nile (1)	MAY-SEP	82	99	106	86	113	130	123
	MAY-JUL	75	90	97	87	104	119	112
	MAY-JUN	61	73	78	87	83	95	90
AMERICAN RIVER nr Nile	MAY-SEP	78	86	91	85	96	104	107
	MAY-JUL	71	78	83	86	88	95	97
	MAY-JUN	59	64	68	86	72	77	79
TIETON RIVER at Tieton (1)	MAY-SEP	119	149	163	77	177	205	213
	MAY-JUL	102	127	138	78	149	174	177
	MAY-JUN	78	97	106	78	115	134	136
WACHES RIVER nr Naches (2)	MAY-SEP	440	500	540	74	580	640	726
	MAY-JUL	395	450	485	75	520	575	645
	MAY-JUN	325	370	400	75	430	475	533
AHTANUM CREEK nr Tempico (2)	MAY-SEP	22	27	30	77	33	39	39
	MAY-JUL	19.0	24	27	77	30	35	35
	MAY-JUN	16.0	19.0	22	76	25	28	29

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
		THIS YEAR	LAST YEAR	AVG.			
KEECHULUS	157.8	147.1	148.5	119.0	Yakima River	15	91
KACHESS	239.0	217.5	155.6	197.0	Ahtanum Creek	1	59
CLE ELUM	436.9	385.1	352.1	308.0			
BUMPING LAKE	33.7	20.7	20.5	15.0			
RIMROCK	198.0	186.3	161.2	144.0			

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

COWLITZ - LEWIS RIVER BASINS

STREAMFLOW FORECASTS								
FORECAST POINT	FORECAST PERIOD	DRIER		FUTURE CONDITIONS		WETTER		25 YR. (1000AF)
		90%	70%	50% (MOST PROBABLE)	30%	10%		
		(1000AF)	(1000AF)	(1000AF) (% AVG.)	(1000AF)	(1000AF)		
LEWIS RIVER at Ariel (2)	MAY-SEP	555	680	765	86	850	980	892
	MAY-JUL	435	540	610	83	680	785	732
	MAY-JUN	365	450	510	84	570	655	606
COWLITZ R. bl Mayfield Dam (2)	MAY-SEP	670	1130	1450	90	1770	2230	1604
	MAY-JUL	535	925	1190	88	1460	1850	1350
	MAY-JUN	430	745	960	88	1170	1490	1092
COWLITZ R. at Castle Rock (2)	MAY-SEP	905	1500	1900	93	2300	2900	2050
	MAY-JUL	710	1200	1540	90	1880	2370	1706
	MAY-JUN	570	970	1240	90	1510	1910	1378

RESERVOIR STORAGE (1000AF)				WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **		WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
		THIS YEAR	LAST YEAR			
0				Cowlitz River	7	95
				Lewis River	3	78

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WHITE - GREEN RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	FUTURE CONDITIONS						25 YR. (1000AF)
		DRIER		CHANCE OF EXCEEDING *		WETTER		
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
GREEN R bl Howard Hanson Dam (2)	MAY-SEP	151	172	186	90	200	220	207
	MAY-JUL	128	146	158	89	170	188	177
	MAY-JUN	110	126	136	89	146	162	153
CEDAR RIVER nr Cedar Falls	MAY-SEP	58	65	70	95	75	83	74
	MAY-JUL	51	58	62	95	67	73	66
	MAY-JUN	42	47	51	94	55	60	54

RESERVOIR STORAGE		(1000AF)			WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE CAPACITY	* USEABLE STORAGE * THIS YEAR	LAST YEAR	AVG.	WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
					White River	3	86 80
					Green River	3	102 84
					Cedar River	0	0 0

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The average is computed for the 1961-1985 base period.

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(2) - The value is natural flow - actual flow may be affected by upstream water management.

OLYMPIC PENINSULA RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	FUTURE CONDITIONS						
		DRIER		CHANCE OF EXCEEDING *			WETTER	
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	25 YR. (1000AF)
DUNCENESS RIVER nr Sequim	MAY-SEP	97	111	120	88	129	143	137
	MAY-JUL	77	88	95	87	102	113	109
	MAY-JUN	68	77	84	87	91	100	97
ELWHA RIVER nr Port Angeles	MAY-SEP	330	375	405	90	435	480	451
	MAY-JUL	265	300	325	90	350	385	363

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
		THIS YEAR	LAST YEAR	AVG.			
					Elwha River	1	76 54
					Morse Creek	1	84 67
					Dungeness River	1	63 21
					Quilcene River	0	0 0
					Wynoochee River	1	56 58

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(2) - The value is natural flow - actual flow may be affected by upstream water management.

NORTH FUGET SOUND RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	FUTURE CONDITIONS						
		DRIER		CHANCE OF EXCEEDING		WETTER		25 YR. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
SKAGIT RIVER at Newhalem (2)	MAY-SEP	1510	1700	1820	88	1940	2130	2062
	MAY-AUG	1400	1570	1690	88	1810	1980	1919
	MAY-JUL	1250	1400	1500	89	1600	1750	1689
	MAY-JUN	1100	1230	1320	89	1410	1540	1485

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE	
		THIS YEAR	LAST YEAR	AVG.				
ROSS	1404.1	763.3	645.9	644.4	Snoqualmie River	1	98	73
DIABLO RESERVOIR		NO REPORT			Skykomish River	3	103	91
GORGE RESERVOIR	9.8	8.0	7.7	---	Skagit River	13	101	81
					Baker River	9	81	57

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

